AMERICAN GAS ASSOCIATION MONTHLY

The Gas Industry's Greatest Convention
Atlantic City, N. J., Oct. 14-18

Tentative Program of the A. G. A. Convention

Research at the A. G. A. Testing Laboratory
By R. M. CONNER

The Los Angeles Uses Gas for Cooking

The Public Utility Industry As a Career
By GEORGE B. CORTELYOU

Cooperative Advertising Started on Coast

Data of Statistical Department Covers First Six Months of 1929
By PAUL RYAN

New Metallurgical Laboratory Is Opened by The Peoples Gas Light and Coke

September, 1929

Volume XI
Number 9

YOUR OPPORTUNITY

Would you be interested in acquiring a better technical knowledge of the essentials of the gas industry; the processes of making coal gas, carburetted water gas, and oil gas; how these gases are prepared for commercial use, their storage and distribution; their use in domestic and industrial appliances; the chemical control of a gas plant; how to avoid accidents in the operation of a gas plant, and the principles of accounting, statistics, rate making, and public relations?

If so, you should enroll in the Home Study Course in Manufactured Gas offered by Columbia University under the auspices of the American Gas Association, a course which includes information and instruction on all the above phases of gas company operation—and more—all under the personal supervision of Professor Jerome J. Morgan of the Columbia University faculty.

A special rate of $60 for this course is available to individual members and employees of member companies of the American Gas Association.

Complete information and application blanks can be secured from the Home Study Department, Columbia University, New York, N. Y., or the American Gas Association, 420 Lexington Avenue, New York, N. Y.

AMERICAN GAS ASSOCIATION MONTHLY

Howard F. Weeks, Editor

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Volume XI SEPTEMBER, 1929 Number 9

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October
14-18
Atlantic City,
N. J.

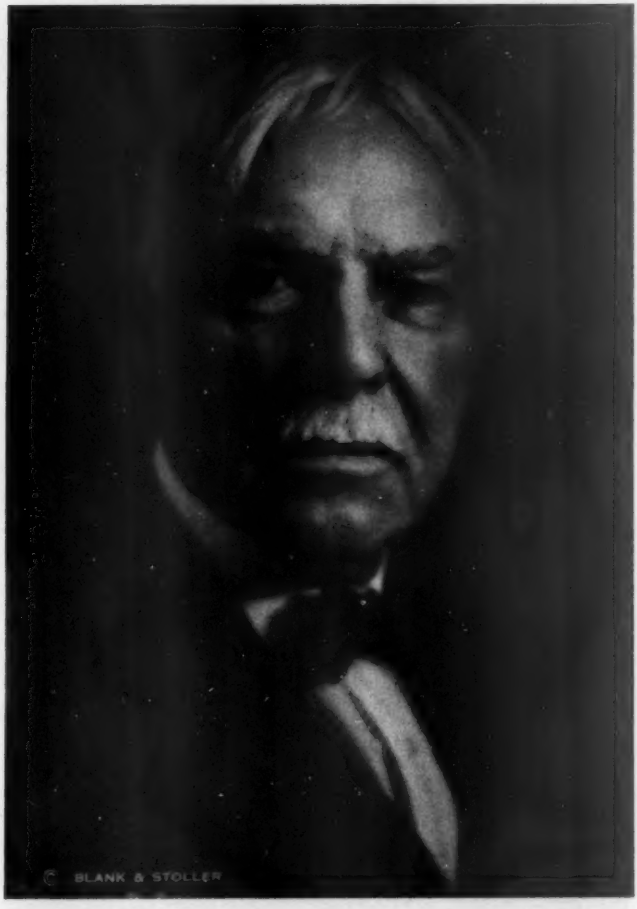
The Association does not hold itself responsible for statements and opinions contained in papers and discussions appearing herein.

Published Monthly by the
AMERICAN GAS ASSOCIATION
420 Lexington Avenue,
New York, N. Y.

Entered as Second Class Matter at the Post Office at Brattleboro, Vermont, February 10th, 1922, under the Act of March 3, 1879.

Subscription Rate $3.00 a Year

Our Own Who's Who



LII

PROF. S. W. PARR

BORN in Granville, Putnam county, Ill., Jan. 21, 1857. Graduated from the University of Illinois in 1884, with degree of B.S. In 1885 received the M.S. from Cornell, later studying at University of Berlin and at Polytechnikum in Zurich. Has been professor in University of Illinois since 1891. Is former director of Illinois State Water Survey, and since 1905 has been consulting chemist on coal investigation in the Illinois State Geological Survey.

He devised Parr calorimeter for determining heat value of coal and other hydrocarbons, widely used in America and Europe, a new type of calorimeter for determining the heat value of combustible gases, a new alloy with acid resisting properties, and a new calorimeter bomb with effective platinum substitution in its construction. Is the author of numerous works on chemistry of coal, and has long been identified with the professional division activity of the American Chemical Society. Is a fellow of American Association for Advancement of Science, member of American Electro-Chemical Society, American Institute of Chemical Engineers, American Institute of Metals, International Railway Fuel Association, Washington Academy of Science, American Society for Testing Materials, American Gas Association, etc.

Is now President of and has been director of the American Chemical Society, as well as member of its executive committee. Has been leader in Division of Industrial and Engineering Chemistry and the Division of Gas and Fuel Chemistry of Society. Has been active on A. G. A. committees.

Long an authority on low temperature carbonization of coal, Prof. Parr has contributed many valuable treatises on the subject to both trade and scientific publications and has delivered many addresses on it. Was awarded Chandler gold medal by Columbia University in 1926.

AMERICAN GAS ASSOCIATION MONTHLY

VOLUME XI SEPTEMBER, 1929 NUMBER 9

The Gas Industry's Greatest Convention, Atlantic City, N. J., Oct. 14-18

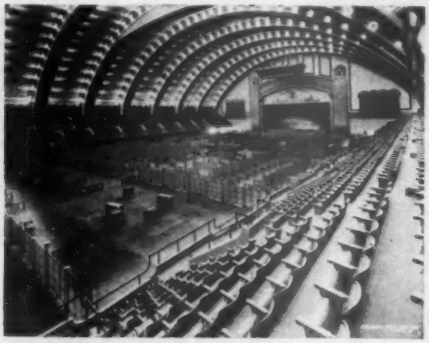
THE eleventh annual convention and exhibition of the American Gas Association, to be held in the new Municipal Auditorium at Atlantic City, N. J., from October 14 to 18, will climax a year of achievement and progress by the gas industry, and will also be the greatest and largest gas convention ever held.

An attendance of six thousand natural and manufactured gas men and guests is expected. Every state in the Union will be represented, and Canada will have a large delegation present. The program arranged for the convention is a strong one, and the exhibition of appliances and equipment will be the largest ever held—two factors which will tend to draw a large crowd of gas men to the famous resort on the Atlantic Ocean.

The exhibition in itself will be well worth the trip to the convention. More space will be used than ever before, and from advance announcements of exhibitors, there will be many newly-developed products on display. The exhibit hall allows ample space for the gas show, and a study of the list of exhibitors and booth numbers, given elsewhere in this issue, reveals the interesting fact that many manufacturers will occupy two or more booths.

The new Atlantic City Auditorium as it will look on the opening night of the A. G. A. Convention, October 14 to 18

The beautiful ballroom



View of exhibition hall in auditorium

General Sessions

The General Sessions of the eleventh annual convention are in keeping with the high standards established at past A. G. A. conventions. A study of the program, as outlined in this issue of the MONTHLY, reveals a list of speakers who by their accomplishments have qualified themselves to address the general sessions and act as real drawing-cards.

Outside of the gas industry, there are such prominent men as Hon. James J. Davis, Secretary of Labor; Dr. Harvey Nathaniel Davis, President of Stevens Institute of Technology; Miss Laura Cauble, chairman of the National Committee on Sanitation; Hon. Lewis E. Gettle, chairman of the Wisconsin Railroad Commission and immediate Past President of the National Association of Railroad and Utilities Commissioners; and Dr. George Edgar Vincent, President of the Rockefeller Foundation.

The speakers who are affiliated with the gas industry are as follows: Samuel Insull, Jr., President of the Midland Utilties Investment Co.; Walter C. Beckjord, vice-president of the American Light and Traction Co.; Geo. E. Whitwell, vice-president of the Equitable Gas Co.; and A. W. Robertson, chairman of the Board of the Westinghouse Company.

In addition there will be the usual reports and addresses of the officers of the Association. The reports of the treasurer and the managing director are always followed with interest, and everybody makes it a special point to hear the President's Address, which covers the high points of the industry's progress.

Evening Meeting

The evening meeting of the A. G. A. convention will probably be one of the highlights of convention week. Hon. James J. Davis is the feature speaker, and his address, together with the presentation of medals and awards, and an excellent and well-balanced entertainment program, will constitute an evening of merit and enjoyment.

It is of interest to note that this program

Pounding the boardwalk will be the pastime of 6000 gas men from October 14 to 18

is of sufficient attractiveness to be broadcast over one of the nation-wide networks of the National Broadcasting Company. Further details of the broadcasting and a list of stations will be printed in the October issue of the MONTHLY.

President Oscar H. Fogg

Natural Gas Department

An item of real interest to the natural gas members of the Association is the program arranged for the Department on Tuesday afternoon, Oct. 15. All natural gas men are urged to study this program carefully, as it contains several papers of vital interest to them.

Sectional Meetings

At the afternoon meetings of the convention the various sections of the Association will convene to enjoy the opportunity of individual discussion of important topics and close study of impending developments. Many items of interest and importance appear on these sectional programs, as printed in this issue, and all are urged to study them carefully so that they can plan to attend the various sessions which contain papers and reports of interest to them in their every-day work.

It is apparent that the program for the convention is representative of the gas industry, and reflects the high place the industry occupies in the present industrial era. Read the programs carefully—and you will find that YOU MUST attend the convention! In addition to program of important subjects and the imposing exhibition, there will be the added opportunity of renewing old friendships.

Important Convention Arrangements

All who plan to attend the annual convention are urged to read the following carefully: Every precaution has been taken to insure the success of the convention. Meeting rooms have all been chosen to accommodate the sessions, and sessions have been arranged to suit the convenience of the majority of the members. Of course, short and snappy will be the rule.

Probably the most important innovation is the arrangement of afternoon sessions to provide for the convenience of the delegates and to give more time for inspection of the exhibition. All afternoon meetings of the various sections and departments have been cut down, and while it has been impossible to eliminate entirely the holding of parallel sessions, a long step has been taken in this direction.

The following is the schedule of meetings arranged by days for the convention week:

Monday Morning, Oct. 14

9:00 o'clock—Exhibition opens.
10:30 o'clock—Manufacturer's Section meeting.

Monday Afternoon, Oct. 14

2:00 o'clock—Women's meeting.
5:00 o'clock—Executive Board meeting.

Tuesday Morning, Oct. 15

10:00 o'clock—General Session.

Tuesday Afternoon, Oct. 15

2:00 o'clock—Natural Gas Department meeting.
2:30 o'clock—Commercial Section meeting.
3:00 o'clock—Technical Section meeting.

There will be no meetings of the Publicity and Advertising Section, the Industrial Gas Section, or the Accounting Section.

Wednesday Morning, Oct. 16

10:00 o'clock—General Session.

Wednesday Afternoon, Oct. 16

2:00 o'clock—Publicity and Advertising Section meeting.
2:30 o'clock—Commercial Section meeting.

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Clifford E. Paige

Vice-president
B. J. Mullaney

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Managing Director
Alexander Forward

Thursday Morning, Oct. 17

10:00 o'clock—General session.

Thursday Afternoon, Oct. 17

2:00 o'clock—Accounting Section meeting.

2:00 o'clock—Industrial Gas Section meeting.

3:00 o'clock—Technical Section meeting.

2:00 o'clock—Industrial Gas Section meeting.
2:00 o'clock—Accounting Section meeting.
3:00 o'clock—Technical Section meeting.

There will be no meeting of the Natural Gas Department on this afternoon.

There will be no meetings of the Publicity and Advertising Section, the Commercial Section, or the Natural Gas Department on this afternoon.

Change in Distribution of Printed Committee Reports and Papers

Another important change in convention procedure is the new method of distributing the printed committee reports. On August 26 a letter was forwarded to all gas company and manufacturer company delegates together with several reports which were available at that time. The letter stated that the printed reports should be passed on to the interested members of the gas or manufacturer company, and that additional copies could be secured from H. H. Harwood, The Vermont Printing Company, Brattleboro, Vermont.

The Association is following a policy this year of distributing to its company members all data or information developed by committees as soon as it is available and without waiting for the annual convention. Orders to Mr. Harwood will be filled up to five copies free of charge. They should be limited to actual needs so that the supply will not be unnecessarily exhausted prior to the convention.

Not all of the reports distributed will be presented for discussion at the convention. Some time in September another mailing will be made of reports and papers which have become available in pamphlet form subsequent to the first mailing.

To some members it is of interest to know which of the committee reports will be presented for discussion at the convention. From present plans these include the following:

Accounting Section:

Report of the Committee on Development of Office Labor Saving Devices—H. E. Cliff, Chairman.

(Continued on page 528)

"I'll see you on the Boardwalk"

Headliners at the Eleventh A. G. A. Convention

Here Are Some Facts About Some of the Prominent Speakers at the General Sessions of the A. G. A. Convention in Atlantic City, N. J.

JAMES JOHN DAVIS

JAMES J. Davis, Secretary of Labor, is a speaker of national reputation. His address, which will be a feature of the convention week, will be given on Wednesday evening to allow it to be broadcast over the National Broadcasting Co. network.

Mr. Davis was appointed Secretary of Labor by the late President Harding, was continued under President Coolidge, and then reappointed by President Hoover. The convention offers splendid opportunity to hear Mr. Davis—his message will be well worth the trip to Atlantic City.

GEORGE EDGAR VINCENT

GEORGE EDGAR VINCENT is listed in Who's Who as an educator. He was President of the Chautauqua Institution from 1907 to 1915, and has been honorary President since 1915. He was at one time dean of faculties of arts, literature, and science at the University of Chicago, and later was President of the University of Minnesota. Since 1917 he has been President of the Rockefeller Foundation, in New York City.

Who better than Mr. Vincent could present the fitting subject of "Getting and Applying the Facts?"

LEWIS E. GETTLE

LEWIS E. GETTLE is chairman of the Wisconsin Railroad Commission and is immediate Past President of the National Association of Railroad and Utilities Commissioners. "Regulation by the Sovereign States" will be the title of Mr. Gettle's address before the General Sessions of the Eleventh Annual American Gas Association convention. Here is a subject of importance—and a speaker of note—by all means plan to hear this address!

Mr. Gettle will speak at the third General Session, to be held on Thursday morning, October 17. Needless to say, there will be a large attendance at this session.

MISS LAURA M. CAUBLE

MISS LAURA M. CAUBLE is at present chairman of the National Conference Board on Sanitation. She has long been identified with the smoke abatement movement, and has done great things in this field. Miss Cauble also does business consulting work.

She is a former director of home economics for the Mellon Institute, and is now a member of the New York and New Jersey Smoke Abatement Board.

Here is an address which everyone will want to hear.

WALTER C. BECKJORD

WALTER C. BECKJORD is a most prominent public utility executive. His record as chairman of the Technical Section of the American Gas Association was an enviable one, and his work for the Economic and Engineering Survey of the Gas Industry marks a real contribution to the advancement of the industry. Mr. Beckjord, who is vice-president of the American Light and Traction Co., will have for his subject, "Where the Industry Stands in Research."

HARVEY NATHANIEL DAVIS

CERTAINLY one of the most interesting papers to be given at this convention will be that by Dr. Harvey Nathaniel Davis, the President of Stevens Institute of Technology, Hoboken, N. J.

Dr. Davis will speak on Tuesday morning, Oct. 15, at the first General Session, and "The Engineer of the Twentieth Century" is to be the title of the address which he will present.

Dr. Davis has chosen a splendid subject for his convention address. It is one with which he is familiar and one in which every gas man will find much food for thought. Dr. Davis will speak with authority and conviction—and no delegate will want to miss this feature.

OSCAR H. FOGG

THE President's Address is always a high mark of the General Sessions. Col. Fogg will discuss the advancement of the industry — bringing out certain facts which are of extreme importance to men in all branches of the gas industry.

Col. Fogg's services in the interest of the A. G. A. and the gas industry date back over a long period. His occupancy of the Presidential chair for two years has been marked with real effort and unstinted zeal in the interest of practical advancement.

SAMUEL INSULL, Jr.

HERE is a man who needs no introduction to the gas industry. He is the son of Samuel Insull, and he has established himself as one of the most progressive public utility executives.

Mr. Insull, Jr., will address the convention on "Economics of Load Building," and this is a subject on which he can speak with authority. Certainly no one will want to miss this address.

GEORGE E. WHITWELL

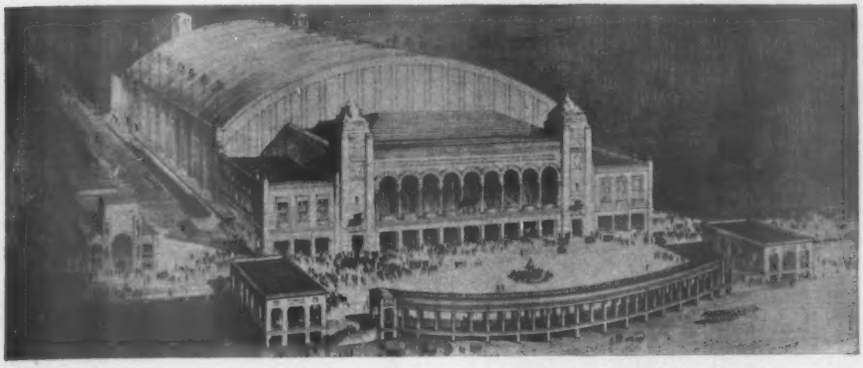
GEORGE E. WHITWELL has long been identified with the gas industry and with the work of the American Gas Association. He has not only set a record for himself as an engineer, but he has also done admirable commercial work. His subject is one of prime importance—look it up in the program in this issue of the MONTHLY.

A. W. ROBERTSON

THE closing remarks of the eleventh annual American Gas Association convention will be given by A. W. Robertson, chairman of the Board of the Westinghouse Electric and Manufacturing Company. Mr. Robertson is well known in A. G. A circles, having served for a considerable length of time as President of the Equitable Gas Company of Pittsburgh, Pa.

Mr. Robertson will close the convention with an address chock full of thought.

There will be other features of the Convention which will be attractive and worth while. Space limitations prevent giving more details here. Come to Atlantic City and see for Yourself.



The new auditorium in Atlantic City—scene of A. G. A. convention, Oct. 14-18

Tentative Program of 1929 A. G. A. Convention

Atlantic City, N. J., October 14-18, 1929

First General Session Program

Tuesday Morning—Oct. 15—10:00 o'clock
Meeting Room A—Municipal Auditorium

Opening Remarks by President Oscar H. Fogg, vice-president, Consolidated Gas Co. of New York, N. Y.

The Association's Finances—Clifford E. Paige, treasurer, A. G. A.; vice-president, The Brooklyn Union Gas Co., Brooklyn, N. Y.

The Industry's Program—Alexander Forward, managing director, American Gas Association, New York, N. Y.

Another Milestone of the Gas Industry—Oscar H. Fogg, President, American Gas Association.

Report of Nominating Committee—E. H. Rosenquest, President, Westchester Lighting Co., Mt. Vernon, N. Y.

Election

The Engineer of the Twentieth Century—Harvey Nathaniel Davis, Ph.D., S. T. D., President, Stevens Institute of Technology, Hoboken, N. J.

Executive Session—(Only Company Member Delegates Eligible to Attend)—Election of Company members; Election of Directors; Election of Nominating Committee; Election of Committee on Resolutions.

Second General Session Program

Wednesday Morning—Oct. 16—10:00 o'clock
Meeting Room A—Municipal Auditorium

Presentation of General Committee Reports— (The presentation of General Committee Reports will be very brief, embodying only a summary of work accomplished and recommendations made by the committee.)

Accident Prevention Committee—E. J. Kreh, Chairman, Equitable Gas Co., Pittsburgh, Pa.

Committee on Education of Gas Company Employees—A. C. Rissberger, chairman, Rochester Gas and Electric Corp., Rochester, N. Y.

Rate Structure Committee—L. R. King, Chairman, United Light and Power Co., Davenport, Iowa.

The Gas Industry's Social Obligation and Economic Opportunity—Miss Laura Cauble, B.S., A.M., chairman, National Conference on Sanitation.

Sales Methods Under Strong Competition—Geo E. Whitwell, vice-president, Equitable Gas Co., Pittsburgh, Pa.

Message from Gas Industry of Great Britain by Trans-Atlantic Telephone Amplified through Convention Hall—Sir David Milne-Watson, managing director, Gas Light and Coke Co., London, England.

Economics of Load Building—Samuel Insull, Jr., President, Midland Utilities Investment Co., Chicago, Ill.

Evening Meeting Program

Wednesday Evening—Oct. 16—8:00 o'clock

Meeting Room A—Municipal Auditorium

B. A. Rolfe's Orchestra.

Charles Hackett, tenor.

Presentation of McCarter Medals for Life Saving.

Presentation of Charles A. Munroe Award—Charles A. Munroe, Chicago, Ill.

Charles Hackett, tenor.

B. A. Rolfe's Orchestra.

Essentials of Progress—Hon. James J. Davis, LL.D., Secretary of Labor, Washington, D. C.

Third General Session Program

Thursday Morning—Oct. 17—10:00 o'clock

Meeting Room A—Municipal Auditorium

Where the Industry Stands in Research—Walter C. Beckjord, vice-president and engineer, American Light and Traction Co., Chicago, Ill.

Regulation by the Sovereign States—Hon. Lewis E. Gettle, chairman, Wisconsin Railroad Commission, and President, National Association of Railroad and Utilties Commissioners.

Getting and Applying the Facts—Dr. George Edgar Vincent, Ph.D., LL.D., President, The Rockefeller Foundation, New York, N. Y.

Closing Remarks—A. W. Robertson, Chairman of the Board, Westinghouse Electric and Manufacturing Co., Pittsburgh, Pa.

Natural Gas Department Program

Tuesday Afternoon—Oct. 15—2:00 oclock

Meeting Room F—Municipal Auditorium

Opening Remarks—S. W. Meals, chairman, Carnegie Natural Gas Co., Pittsburgh, Pa.

Modern Pipe Line Construction Methods—Elmer F. Schmidt, Lone Star Gas Co., Dallas, Texas.

The Underground Storage of Gas—S. W. Meals, Carnegie Natural Gas Co., Pittsburgh, Pa.

Natural Gas Rates and Cost Allocations—F. C. Hamilton, Henry L. Doherty & Co., New York, N. Y.

Report of Nominating Committee—A. W. Leonard, chairman, Devonian Oil Co., Tulsa, Okla.

Election.

Reports of Committees.

Open Discussion.

Accounting Section Program

Wednesday Afternoon—Oct. 16—2:00 o'clock

Meeting Room A—Municipal Auditorium

Address of Chairman—F. H. Patterson, Rochester Gas & Electric Corp., Rochester, N. Y.

Report of Nominating Committee—Edward Porter, Chairman, Philadelphia Suburban Counties Gas & Electric Corp., Philadelphia, Pa.

Election.

Report of Exhibit Committee—Sidney Curren, Chairman, The Public Service Electric & Gas Co., Newark, N. J.

Procedure in Natural Gas Business from the time the Lease is Taken until Gas is Delivered at the City Line—E. B. Nutt and R. D. Beardsley, Hope Natural Gas Co., Pittsburgh, Pa.

Scientific Office Management—Harry Arthur Hopf, H. A. Hopf & Co., New York, N. Y.

Statistics of the Gas Industry—Paul Ryan, Statistician, A. G. A. Headquarters.

Report of the Committee on Development of Office Labor Saving Devices—H. E. Cliff, Chairman, The Public Service Electric & Gas Co., Newark, N. J.

Report of the Committee on Fixed Capital Records—C. E. Eble, Chairman, Consolidated Gas Co. of New York, New York, N. Y.

Thursday Afternoon—Oct. 17—2:00 o'clock

Meeting Room A—Municipal Auditorium

Report of the Committee on Uniform Classification of Accounts—H. M. Brundage, Chairman, Consolidated Gas Co. of New York, New York, N. Y.

Report of the Committee on Functions of the Auditor—D. H. Mitchell, Chairman, Northern Indiana Public Service Co., Hammond, Ind.

Getting and Keeping Close to the Customer—E. P. Prezzano, vice-president, Westchester Lighting Co., Mt. Vernon, N. Y.

Presentation by Chairmen of Subcommittees of the Relations with Customers Committee as follows:

Report of Subcommittee on Method of Training the Supervising Personnel—Wm. L. Diehl, Chairman, Westchester Lighting Co., Mt. Vernon, N. Y.

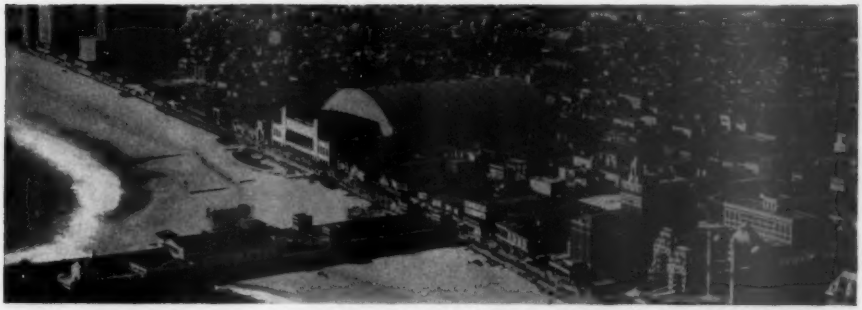
Report of Subcommittee on Public Relations from the Distribution Engineer's Viewpoint—Harry Ellis, Chairman, The Public Service Electric & Gas Co., Newark, N. J.

Report of Subcommittee on Gas Company Credit and Collections—J. G. Waddick, Chairman, The Peoples Gas Light & Coke Co., Chicago, Ill.

Report of the Insurance Committee—R. T. Kendall, Chairman, Consumers Power Co., Jackson, Mich.

Value of Accounting to Management—Dean John T. Madden, New York University School of Commerce, Accounts and Finance, New York, N. Y.

Report of the Committee on Office Personnel—Harold B. Bergen, Chairman, H. L. Doherty & Co., New York, N. Y.



Any birds hovering over Atlantic City in October will get this impression of the A. G. A. in convention assembled

Commercial Section Program

Tuesday Afternoon—Oct. 15—2:30 o'clock
Meeting Room B—Municipal Auditorium

Address of Chairman—G. M. Karshner, Consolidated Gas Company of New York, N. Y.

Report of Nominating Committee—J. J. Burns, Chairman, The Laclede Gas Light Co., St. Louis, Mo.

Election.

House Heating:

Sales Prospects in House Heating—H. B. Johns, The Peoples Gas Light and Coke Co., Chicago, Ill.

The Importance of Insulation in the Future Development of House Heating—Paul V. Close, American Society of Heating and Ventilating Engineers, New York, N. Y.

Merchandise Accounting—H. C. Davidson, Consolidated Gas Company of New York, N. Y.

Results from Cooperative Merchandise Activities and Suggestions for Further Development:

A. J. Peters, Consolidated Gas Company of New York, N. Y.
John H. Hartog, Portland Gas and Coke Co., Portland, Ore.
E. R. Acker, Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y.

Water Heating:

M. B. Buckley, Kansas City Gas Co., Kansas City, Mo.
H. E. Dexter, Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y.

Wednesday Afternoon—Oct. 16—2:30 o'clock
Meeting Room B—Municipal Auditorium

What Home Service Is Doing in Foreign Countries—Miss Dorothy Dignam, N. W. Ayer & Son, Philadelphia, Pa.

Domestic Load:

A Survey of Methods to Prevent Loss and Insure Gain of Domestic Cooking Load—W. H. Tappan, Tappan Stove Co., Mansfield, Ohio.

Developing Domestic Uses Other Than Cooking—John K. Swanson, Minneapolis Gas Light Co., Minneapolis, Minn.

Salesman's Compensation—F. L. Hallock, Bronx Gas and Electric Co., New York, N .Y.

Refrigeration:

Sales Methods and Results—R. L. Hallock, The Brooklyn Union Gas Co., Brooklyn, N. Y.

Load Characteristics—E. J. Devlin, The Brooklyn Union Gas Co., Brooklyn, N. Y.

Past Progress and Future Possibilities in Gas Utility Sales Work:

R. J. Canniff, Standard Gas Equipment Corp., Chicago, Ill.
J. P. Hanlan, The Public Service Electric and Gas Co., Newark, N. J.
William Gould, Gas and Electric Improvement Co., Boston, Mass.
J. E. Davies, The Peoples Gas Light & Coke Co., Chicago, Ill.

Why not be one of the 6000 gas men who will be in Atlantic City from October 14 to 18 to attend the eleventh annual convention of the American Gas Association?*

Make Your Plans Now!

* And the biggest ever held.

Industrial Gas Section Program

Wednesday Afternoon—Oct. 16—2:00 P.M.
Meeting Room C—Municipal Auditorium

Address of the Chairman—J. P. Leinroth, The Public Service Electric and Gas Co., Newark, N. J.

Report of Nominating Committee—F. C. Mackey, Chairman, Public Service Company of Northern Illinois, Chicago, Ill.

Election

Conversion Burners for Large Volume Water Heating—A. A. Pihlman, Consolidated Gas Co. of New York, N. Y.

The Influence of Constitutional Characteristics of Steel on Scientific Forge Design—W. E. Jominy, University of Michigan, Ann Arbor, Mich.

Aeration of Industrial Gas Burners—Prof. O. L. Kowalke, University of Wisconsin, Madison, Wisc.

Thursday Afternoon, Oct. 17—2:00 P.M.
Meeting Room C—Municipal Auditorium

Review of Results Obtained with and Forecast of Possibilities for Further Development of Off-Peak Rate Schedules—E. L. Wilder, Rochester Gas and Electric Corp., Rochester, N. Y.

What the Manager of a Small Gas Property can do to Secure Industrial Business—A. J. Goss, Chattanooga Gas Co., Chattanooga, Tenn.

Effect of Public Relations on Industrial Gas Sales and Influence of Industrial Gas Sales on Public Relations—Prof. Philip Cabot, Harvard University, Cambridge, Mass.

Holding the Industrial Gas Load—A. F. Mitchell, Northern Indiana Public Service Co., Hammond, Ind.

Manufacturers' Section Program

Monday Morning, Oct. 14—10:30 A.M.
Meeting Room C—Municipal Auditorium

Address of the Chairman—H. Leigh Whitelaw, American Gas Products Corp., New York, N. Y.

Report of Nominating Committee—W. E. Steinwedell, The Gas Machinery Co., Cleveland, Ohio.

Election

Simplified Practice in the Gas Appliance Industry—Edwin W. Ely, chief, Division of Simplified Practice, Bureau of Standards, Washington, D. C.

New Business.

Palaces by the sea—the 1929 convention city of the gas industry

Publicity and Advertising Section Program

Wednesday Afternoon—Oct. 16—2:00 o'clock

Meeting Room D—Municipal Auditorium

Address of the Chairman—E. Frank Gardiner, Midland Utilities Investment Co., Chicago, Ill.

Report of Nominating Committee—Harlow C. Clark, Chairman, The Public Service Electric and Gas Co., Newark, N. J.

Election

Employee Publications—Charles E. Wetzel, The United Gas Improvement Co., Philadelphia, Pa., and Chas. D. Greason, Gas Service Co., Kansas City, Mo.

Merchandise and Sales Advertising—Miss Lois Upshaw, Dallas Gas Co., Dallas, Texas.

The A. G. A. Advertising Copy Service—Keith Clevenger, Director of Publicity and Advertising, American Gas Association, New York, N. Y.

Regional Advertising—C. D. Williams, New England Gas Association, Boston, Mass.
J. K. Swanson, Minneapolis Gas Light Co., Minneapolis, Minn.
Frank H. Bivens, Southern Counties Gas Co., Los Angeles, Calif.

Why Gas Companies Advertise—William H. Hodge, vice-president, Byllesby Engineering and Management Corp., Chicago, Ill.

Typography and Layout—Vaughn Flannery, N. W. Ayer and Son, Philadelphia, Pa.

Outdoor Advertising—Representative of Outdoor Advertising Association.

Public Relations—Earle W. Hodges, Henry L. Doherty and Co., New York, N. Y.

The new municipal auditorium—meeting place of the A. G. A.—is shown at the right

Technical Section Program

Tuesday Afternoon—Oct. 15—2:00 o'clock

Meeting Room E—Municipal Auditorium

Address of Chairman—H. E. Bates, The Peoples Gas Light & Coke Co., Chicago, Ill.

Report of Nominating Committee—Walter C. Beckjord, Chairman, American Light & Traction Co., Chicago, Ill.

Election.

Report of the Committee on Economic and Engineering Survey of the Gas Industry—B. V. Pfeiffer, Chairman, The United Gas Improvement Co., Philadelphia, Pa.

Report of the Subcommittee on Engineering and Economic Problems Involved in Changing from Manufactured to Natural Gas Supply—W. D. Burk, Chairman, San Antonio Public Service Co., San Antonio, Texas.

The Use of the Low-Gravity Water Gas Process and Butane Enrichment for Meeting Peak Loads —J. F. Duesler, Asst. Supt., Beargrass Plant, Louisville Gas & Electric Co., Louisville, Ky.

Wednesday Afternoon—Oct. 16—2:00 o'clock

Meeting Room E—Municipal Auditorium

Report of the Committee on Dehydration of Gas—F. W. Sperr, Jr., Chairman, The Koppers Co., Pittsburgh, Pa.

Experience in Dehydration in Great Britain—Charles Cooper, M.Sc., c/o W. C. Holmes & Co., Ltd., Westminster, London, England.

Contributions of Chemical Engineering to the Gas Industry—Prof. A. H. White, University of Michigan, Ann Arbor, Mich.

Thursday Afternoon—Oct. 17—2:00 o'clock

Meeting Room E—Municipal Auditorium

Title to be announced—Thos. R. Weymouth, President, Oklahoma Natural Gas Corp., Tulsa, Okla.

A Present-Day Analysis of Carbonization Problems—Prof. S. W. Parr, University of Illinois, Urbana, Ill.

Joint Presentation of the following Committee Chairmen:

J. V. Postles, Chairman of the Carbonization Committee.
H. J. Rose, Chairman of the Chemical Committee.
F. M. Goodwin, Chairman of the Distribution Committee.
John H. Wolfe, Chairman of the Water Gas Committee.

Women's Meeting Program

Monday Afternoon—October 14—2:00 o'clock

Meeting Room D—Municipal Auditorium

Program to be announced.

Night view of Atlantic City's famous boardwalk and hotels

Change in Distribution

(Continued from page 518)

Report of the Committee on Fixed Capital Records—C. E. Eble, Chairman.

Report of the Committee on Functions of the Auditor—D. H. Mitchell, Chairman.

Report of the Insurance Committee—R. T. Kendall, Chairman.

Report of the Committee on Office Personnel—H. B. Bergen, Chairman.

Technical Section:

Report of the Committee on Dehydration of Gas—F. W. Sperr, Chairman.

Commercial Section: As in previous years, no printed committee reports will be read or discussed from the platform. Copies of all reports will be distributed as described on page 518.

Industrial Gas Section: No printed committee reports will be read or discussed. All reports will be distributed as outlined on page 518.

Splendid Entertainment Features Provided

As usual, the entertainment functions of the convention will be of a high order. While first and foremost attention is given to the business sessions and to the exhibit, the attractive entertainment features arranged will add greatly to the success of this convention. The entertainment committee, under the capable leadership of W. J. Clark, of Mount Vernon, N. Y., has provided a program of wide appeal, high spots of which follow:

B. A. Rolfe's orchestra, one of the best-known in the world, and one of the most popular radio orchestras, will provide musical delight for the dancers, and will also play at other intervals.

Tuesday Evening, Oct. 15, 8:30 o'clock

There will be a dance in the ballroom of the Municipal Auditorium from 8:30 to 1:00 o'clock. Music will be furnished by B. A. Rolfe and his orchestra of 27 men. Admission by convention badge only.

Wednesday Afternoon, Oct. 16

The Association will entertain the ladies at a lunch and card party at the Seaview Golf Club. Music during the luncheon will be furnished by B. A. Rolfe's orchestra. Busses will leave the Hotel Traymore at noon and will return the ladies to the Traymore at the conclusion of the card playing. Admission by tickets obtainable at the registration desk.

Wednesday Evening, Oct. 16

The evening meeting of the convention will start at 8:00 o'clock. B. A. Rolfe's orchestra will give a concert, and Charles Hackett, tenor, will be the soloist of the evening. Part of this program is to be broadcast over a nation-wide network of the National Broadcasting Company. Dancing in the ballroom will follow. Admission by convention badge only.

Thursday Evening, Oct. 17

This will be Gala Night—a fancy dress dance in the ballroom from 8:30 to 1:00 o'clock. Arrangements have been made with an official costumer so that those members who do not provide their own costumes will be able to rent them. This costumer will be located at the Auditorium. Prizes will be awarded for the best costumes as follows: Men—Most striking costume, most beautiful costume, most original costume, most unique costume; Ladies—Most striking costume, most beautiful costume, most original costume, most unique costume.

These prizes will be awarded by a special committee of judges composed of the director general of the Atlantic City beauty pageant, chairman; the President of the Atlantic City Chamber of Commerce, a vice-president of an Atlantic City bank, a vice-president of an Atlantic City hotel, the general manager of a large Atlantic City advertising company.

Golf

Arrangements have been made with the Seaview Golf Club so that the members may

enjoy the privileges of this Club from Monday, Oct. 14, to Friday, Oct. 18, inclusive. Cards of introduction will be obtainable at the Registration Desk.

Aviation Service

A "sign of the times" appears in a letter received by A. G. A. Headquarters from the Curtis Flying Service, which states that the service, "through its national chain of operating units, can offer exceptional facilities for air transportation to the convention of the American Gas Association."

Special Train from Chicago

As in past years, The Peoples Gas Light and Coke Co., of Chicago, Ill., will cooperate with the Pennsylvania Railroad in providing a special convention train from Chicago to Atlantic City. This special train will consist of twelve sleepers, two diners, and one club car.

The special train will leave Chicago on Sunday, October 13, at 1:45 p.m., and arrive at Atlantic City, N. J., on Monday, October 14, at 11:05 a.m.

This train will be especially popular for delegates from the Middle West and the Far West.

Inquiry and applications for reservations should be addressed to A. H. Thorn, The Peoples Gas Light and Coke Co., 1819 Peoples Gas Building, Chicago, Ill.

Special Train from New York

The Pennsylvania Railroad has announced that a special American Gas Association convention train will be run from New York to Atlantic City, N. J., on Monday afternoon, Oct. 14. The train will leave the Pennsylvania Station, in New York, at 1:15 p.m. Further information can be secured direct from R. K. Askart, passenger representative, The Pennsylvania Railroad, 390 Seventh Ave., New York, N. Y.

Reduced Fares

Of course the usual reduced railroad fares will be in effect. All members of the American Gas Association will be advised of this by circular letter in the near future.

TRADE LABORATORIES

THE trade association is both a laboratory and a forum. It offers an industry the facilities for intelligent research—the laying on the table for miscroscopic examination, so to speak, of productive and marketing and administrative methods and technique, as well as the searching out of possibilities which science and invention may offer for the units and the industry as a whole. Moreover, the trade association registers the progress and profit of the individual industry, enabling it to form lines of offense and defense in the competition of industry with industry—a competition, in many respects, more vigorous and more intensive than the competition of unit with unit within the industry.—William Butterworth, President, U. S. Chamber of Commerce.

GAS REFRIGERATOR SALES SHOW BIG INCREASE

SALES of gas refrigerators by the Consolidated Gas Company of New York and Affiliated Companies are far ahead of 1928, according to a statement made recently by N. T. Sellman, assistant secretary of the company.

Mr. Sellman said that 2200 refrigerators were installed in the month of July, making a total of 6066 from January to August. In the entire year of 1928 this company and other companies in its system sold 3403 refrigerators.

Brooklyn Poly. Gas Course Starts on Sept. 26

UNDER the direction of Professor Edwin F. Church, Jr., head of the Mechanical Engineering Department, the Polytechnic Institute of Brooklyn will for the third consecutive year offer to the manufactured gas and allied industries a course dealing with the fundamental scientific principles underlying the production, distribution, and utilization of manufactured gas.

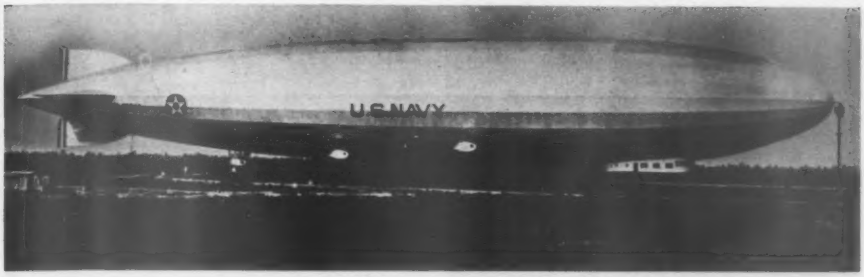
In addition to the 26 lectures, there will be personally conducted inspection trips to various gas works during the course to give the students opportunity for examining actual equipment and witnessing its operation.

Instruction in the course is given by members of Brooklyn Polytechnic Institute teaching staff, assisted by specialists chosen from The Brooklyn Union Gas Co., Consolidated Gas Co. of New York, and the American Gas Association.

After a brief review of the past history of the industry, the lectures proceed to a consideration of the general physical law of gases and the chemical processes of combustion and gas making. These studies are amplified by experimental work done during the laboratory sessions. Gas manufacturing processes will then be taken up in detail, including a study of raw fuel used, equipment required, methods of operation, properties of the products made by the different processes, the purification system used, the by-products obtained, and the chemical methods of controlling quality.

Telling the Story of Gas in Industry

These pictures show three billboards along the right of way of the big railroads into Chicago. The design of the billboards is standard, as suggested by the Industrial Gas Section of the A. G. A. Many gas companies are arranging for similar boards in their territory. Further information can be secured from C. W. Berghorn, secretary, Industrial Gas Section, American Gas Association, 420 Lexington Ave., New York, N. Y.



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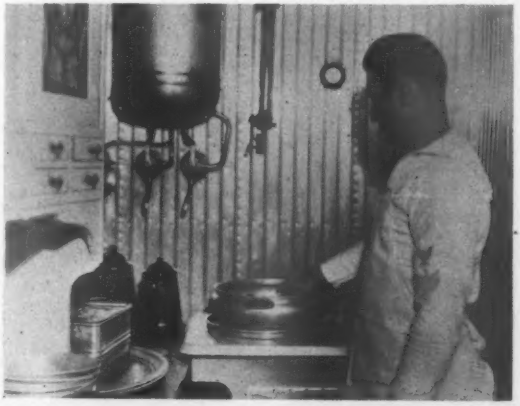
The world-famed airship Los Angeles

The Los Angeles Uses Gas for Cooking

WHILE the gas range is probably one of the most commonly-seen household appliances in existence, when the gas range takes flight there is, in newspaper terminology, "a story." The United States Navy airship, the famous *Los Angeles,* uses a gas range for cooking, and that gas for cooking is as fine a service in the air as it is on the ground, is seen in the following paragraphs abstracted from the publication, *Airships,* published by the Navy Relief Society, New Jersey Auxiliary, United States Naval Air Station, Lakehurst, N. J.:

"One of the important parts of the ship in which everyone is interested is the ship's galley or kitchen. Perhaps because of the prohibition against smoking on airships, one gets very hungry. Everybody aboard eats everything he can get, a ravenous appetite being stimulated by the fresh ozone. Some airships are fitted with an electric range for cooking, but the latest development used in the Los Angeles is an adaptation of a commercial gas range using a gas contained in liquid state in ten-gallon drums. The liquid is evaporated at the burner, forming a gas which burns exactly like ordinary gas. The pipes taking the liquid from the container to the burner are exceedingly strong and are practically safe against leaks, especially as the gas has a very pungent odor which can be instantly detected should a leak develop. By this means the cooking outfit is confined to a weight of about 100 pounds including the fuel, whereas with an electric generator and an electric stove the weight is about 500 pounds without considering the necessary fuel. With an electric generator, which derives its fuel from the motion of the ship through the air through a windmill propeller, it is necessary for the airship to have considerable speed to develop sufficient heat in the burner. This is one of the reasons why the passengers on the **Graf Zeppelin** complained of the food during the last two days of the flight when the crippled ship had to proceed slowly. This difficulty is obviated with a gas range, which is available at all times, and even if the ship is to leave exactly at meal time, the food can be prepared, ready to serve immediately the ship is in flight. On account of the necessity of saving weight, only the lightest tableware is carried; in fact the crew uses aluminum knives and forks. One can imagine the job it is for one cook to prepare three meals a day for 50 or 60 passengers, but it is certainly a comfort in a cold



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View of the kitchen of the Los Angeles, showing gas range

Commander Eckener and Commander Rosendahl, of the ships Graf Zeppelin and Los Angeles, respectively, who have both done much to popularize the airship

airship to have a satisfactory hot meal to help break the monotony, satisfying the seemingly constant hunger.

"In order that the food may be prepared it is necessary to have complete cooking facilities on the ship. These facilities consist of a small galley in which there is running water, a large sink, numerous shelves and drawers for stowage of provisions, mess gear, and cooking utensils, and a four-burner gas range. This range uses a fuel which burns in much the same manner as ordinary natural gas. This gas comes in a liquefied state, in ten-gallon drums. One drum of gas will last for a period of 300 burner hours and weighs but 82 pounds. A portable oven is used which permits the preparation of baked foods when desired."

Obviously, if it's done with heat, you can do it better with gas.

Survey of Merchandising and Sales Management Practices Under Way

THE nation-wide field survey made in connection with the American Gas Association's Course in Domestic Gas Salesmanship revealed the fact that there are many profitable merchandising methods and sales management practices used by gas companies which, if analyzed and made available to all companies, would be of inestimable value. The need for such a survey was fully discussed at the last meeting of the Managing Committee of the Commercial Section and a mail ballot since that time has indicated a widespread interest in the subject. As a result, arrangements have been made to conduct a national survey for the purpose of gathering from about 75 companies all the available material pertaining to merchandising and sales management in the gas industry. This material will be analyzed and coordinated and made available in the form of a series of texts, designed not only for sales and merchandise executives but also for branch managers, supervisors, and all others who are in charge of merchandising activities.

Among the subjects to be covered are: Planning gas sales objectives; organizing merchandising set-ups; selecting, hiring and training salesmen; preparing salesmen for special services and activities; methods of fixing salesmen's compensation to achieve objectives in load building; directing a sales force; sales records and statistics as an aid in setting up methods of sales control; handling crew operations; planning special and seasonal sales campaigns; opening new territory; tying in sales activities with advertising and direct mail campaigns; getting cooperation from other departments; and such other phases of managerial activities as are believed important.

The survey will be inaugurated about the first of September and it is expected that the first text will be available on or about January 1, 1930.

This activity will enlarge the present sales services available to Association members so as to cover not only the training of salesmen but also review of the best merchandising and sales practices from a managerial standpoint.

Further announcements as to the exact subjects to be covered and conditions of participation will be given in an early issue of the MONTHLY.

Cooperative Advertising Started on Coast

The MODERN Fuel
Gas
QUICK · CLEAN · SURE

AT 10:50 o'clock on the morning of August 14 the Pacific Coast Gas Association inaugurated its regional cooperative advertising program. The radio, and magazines and newspapers are the media used. The slogan of the campaign is "The Modern Fuel—GAS—quick, clean, sure"—and is used in the design shown on this page.

The Pacific Coast Gas Association is the second to inaugurate regional advertising. The New England Gas Association was first, and is now in the second year of its regional program, while many other sections are studying the plan and laying out methods.

The Pacific Coast Committee on Cooperative Gas Advertising consists of D. L. Scott, Los Angeles, chairman; F. H. Holden, Los Angeles; and J. Charles Jordan, San Francisco; C. H. Potter, chairman, P. C. G. A. Commercial Section; and Clifford Johnstone, secretary, P. C. G. A. A working prospectus has been issued which states the plan of the program, and gives samples of advertising copy, typical radio talks, and all necessary information.

The objectives of the campaign have been outlined under two headings: Home customers, and Industrial customers. The domestic objectives are to make the public "gas conscious," to overcome the tendency to think of gas as an old-fashioned fuel, to be informative and educational, to sell the idea of what gas can do through the use of modern appliances by eliminating difficulties due to faulty adjustments or obsolete equipment, by stressing the modernity of gas and the things that can be accomplished with the newer appliances—and by emphasizing the speed, cleanliness, and efficiency of the appliances. The purchase of appliances and the greater and more efficient use of them will be encouraged in the advertising *to increase gas consumption.*

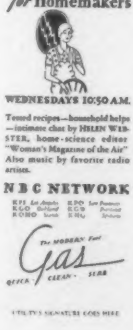
The industrial objectives are practically the same, and the copy will demonstrate by facts and actual examples that gas is an economical and efficient fuel.

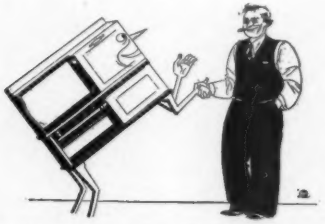
The methods of the campaign are also divided into home customer and industrial customer classifications, as follows:

Home Customers

There will be weekly broadcasts through the "Women's Magazine of the Air," of the National Broadcasting Co., over the following stations: KPO, San Francisco; KGO, Oakland; KFI, Los Angeles; KGW, Portland; KOMO, Seattle; and KHQ, Spokane. Booklets imprinted with the local company's name will be distributed in response to radio requests. Newspaper advertisements will be furnished which will be placed by the cooperating local utilities. Window and display cards will be distributed and used.

There will be 26 radio programs, starting at 10:50 A.M. Wednesdays, and lasting 20 minutes. These programs will consist of an announcement of the sponsoring gas companies, music, reading of a poem, talk by Helen Webster, domestic science authority, music, and a thought for the day. This is the standard form developed by the N. B. C. These talks are all practical, and will cover such subjects as oven canning, gas refrigeration, oven-cooked meals, hot breakfasts, heating individual rooms, etc. A few of these talks will be printed in a future issue of the MONTHLY.





Make GAS *your silent partner!*

Gas installations pay—and bring *repeat* trade.

The public understands and likes gas. It is the dependable, always-ready fuel that means comfort and convenience to millions of homes. And the improved modern gas appliances are creating millions of dollars in new sales.

If you are not getting your share of the builder's or home-owner's dollar, give serious thought to the possibilities of developing more gas business!

Builders can readily be sold on better and more complete gas-plumbing. They have learned that modern gas equipment helps sell homes, and attracts desirable tenants. Too, old homes and buildings, with out-of-date or incomplete installations, offer an almost *limitless* sales field.

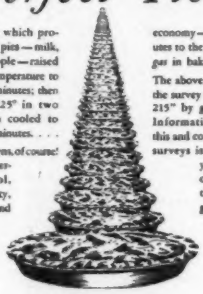
Make gas your "silent partner" in developing profitable new trade. And take your installation problems to the gas company's engineers. They are ready and willing to help you!

The MODERN Fuel Gas QUICK CLEAN COOL

PACIFIC COAST GAS ASSOCIATION

LOS ANGELES · SAN FRANCISCO · PORTLAND
SAN DIEGO · SEATTLE · SPOKANE

6,000 *Perfect Pies*



The bakery which produced these pies—milk, fruit and apple—raised the oven temperature to 575° in 75 minutes; then raised to 425° in two hours; then cooled to 330° in 30 minutes. . . .

Gas-fired ovens, of course! Flexibility, perfect control, dependability, cleanliness and economy—each contributes to the supremacy of *gas* in bakery operation.

The above facts are from the survey of "Plant No. 215" by gas engineers. Information based on this and countless similar surveys is available to you—without obligation—through your gas company.

The MODERN Fuel Gas QUICK CLEAN COOL

PACIFIC COAST GAS ASSOCIATION

LOS ANGELES · SAN FRANCISCO · PORTLAND
SAN DIEGO · SEATTLE

Two of the advertisements the P. C. G. A. is inserting in the leading trade and technical publications on the Pacific Coast

Industrial Customers

The industrial campaign will run for six months, concurrently with the radio programs. The main feature of this phase of the program will consist of advertisements in trade and technical publications having a circulation on the Pacific Coast. The following fields will be reached: Machinery, Building, Baking, Restaurants—Hotels—Caterers, Confectioners, Plumbing and Heating. Obviously, all industries using gas cannot be reached at first, but the selection of magazines made does give the maximum number of industries that can be adequately covered with the present appropriation. Reprints of these advertisements will be mailed, with letters, to local industrial plants by the local utilities at their discretion.

Merchandising Feature

In a number of radio talks, listeners will be invited to ask for free adjustment service in the event of trouble or dissatisfaction. It is believed that such requests will afford frequent opportunities for appliance sales, in addition to increasing good will. Those in charge of the advertising suggest that the local companies supply their service men with cards which can be filled out with information on the condition of the appliances, the need for other appliances, etc.

Besides the material mentioned above, the committee is supplying local companies with slogan cuts, display cards, etc. The recipe and service booklet, which is sent free to all radio listeners, is an attractively printed book of 48 pages. It is chock full of helpful information.

In announcing the advertising program, Charles H. Dickey, President of the Pacific Coast Gas Association, said:

"Too long the gas industry has been content to serve only those customers who came unsolicited, attracted by the unburnished and unpublished virtues of the service. It is now time that the good qualities of gas as an agent of domestic happiness and industrial prosperity should receive the same degree of exploitation that has been lavished upon other, and often competing, services.

"And it is well that this exploitation should be cooperative; for the task is the job of the entire industry, and the cooperative idea has proved its value in many nation-wide experiments."

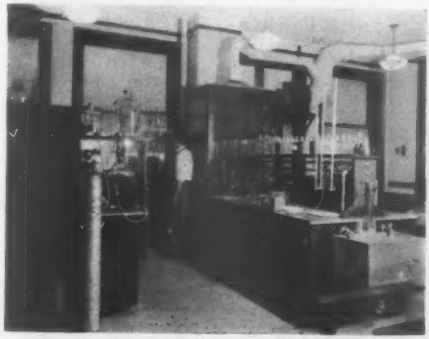
Central Hudson Bulletin Has Water Color Cover

THE water color printing process was used on the cover of a recent issue of the **Central Hudson Bulletin**, company magazine of the Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y. This is believed to be the first time a utility company magazine has used this process.

New Metallurgical Laboratory Is Opened by The Peoples Gas Light and Coke

Using the metallurgical microscope

THE opening of the new Metallurgical Research Laboratory of The Peoples Gas Light and Coke Company of Chicago marks one of the most advanced steps ever taken by a public utility to place at the disposal of its large customers a scientific and industrial help based on industry's modern conception of cooperation. This new Laboratory is a tangible indication that industrial gas has definitely taken its place of importance in Chicago. On the other hand, the work of the new Laboratory's smaller predecessor was a contributing factor of no small moment in building up the splendid industrial gas load enjoyed by The Peoples Gas Light and Coke Company.



The gas analysis section

Located in the large office building of The Peoples Gas Light and Coke Company on Michigan Boulevard, the Laboratory is easily accessible to the technical executives of the large manufacturing companies centering around Chicago.

Announcement of the opening of the new Metallurgical Laboratory was made in a booklet published this month. The purpose is described as follows:

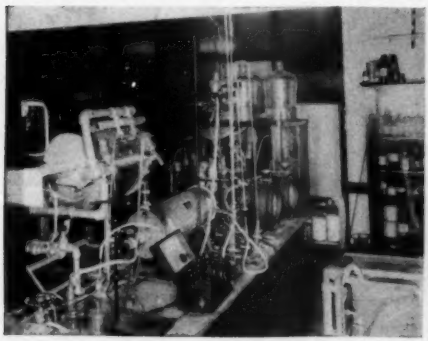
"First, to assist the present customers of The Peoples Gas Light and Coke Company in locating and correcting any difficulties which may be experienced in the conduct of heat treating operations of any kind.

"Second, to obtain specific information on which to base recommendations for, or designs of, gas-fired furnace equipment for various heat treating operations.

"Third, to search for fundamental scientific knowledge which must be obtained in order to improve manufacturing processes and broaden the usefulness of gas to this community.

"While these are the basic principles which have prompted the founding of this laboratory service, the direction of its growth must necessarily depend upon the experience of the immediate future. For that reason, no inflexible policies of operation have been defined nor will any momentary impressions be per-

Another view of the laboratory



Here are shown three interesting views of the new metallurgical laboratory of The Peoples Gas Light & Coke Co., Chicago, Ill. At the top, left, is a picture of the gas utilization research apparatus, showing various pieces of equipment such as furnaces, pumps, dehydration towers, temperature indicating and recording devices, etc. At the top, right, is shown the chemical and thermal research equipment. Below is a view of the laboratory

mitted to influence unduly the natural course of development. It is contemplated that the efforts of the laboratory staff and the addition of equipment will be governed entirely by the gradual accumulation of sufficient knowledge to project research investigations in the direction which will finally result in the greatest benefit to the customers supplied by The Peoples Gas Light and Coke Company."

As far back as 1920, the management of The Peoples Gas Light and Coke Company, in the promotion of industrial gas utilization, found that it was imperative to organize a technically trained personnel to take care of that portion of their business. Consequently, the industrial gas department was reorganized at that time and a continuous effort has since been made to render to Chicago manufacturers an adequate fuel service constantly improving in all-around effectiveness.

From day to day it has become increasingly apparent that to keep step with the march of progress, those in the fuel industry must become more and more familiar with the problems of the manufacturer in order to satisfactorily meet his requirements. Due to progress in all lines of manufacture, complications in processing have arisen which require the assistance of specialists to improve manufacturing methods. Because of the wide use of gas in the metal working industry in Chicago, the industrial engineers of The Peoples Gas Light and Coke Company (for a period of seven years) have had the benefit of the services of a metallurgist and the advice of the personnel of the company's testing department laboratories.

The value of such assistance has been so marked that each year has found increased attention paid to the scientific aspects of the various problems presented in the utilization of gaseous fuel. In 1928, research and development activities reached a point

(Continued on page 568)

EDITORIAL

News and Service Charges

By ALEXANDER FORWARD

THE other day the writer was struck forcibly in the midriff by perusal of an article occupying a prominent place under a big headline in the leading daily newspaper of a State. It was in the form of a news dispatch from the regular correspondent in an important city of that State.

This news story was a perfect argument in favor of a service charge for banks. The banking institutions of the city had agreed upon a rule, effective at once, for a monthly charge of $1 for each account with an average balance of less than $100. The correspondent argued the case for the banks. He said that every bank has a certain amount of fixed costs applying to every depositor, no matter whether he avails himself of a small or large part of the bank's services, or for months at a time no part at all. The bank stands ready to serve him and must bear the expense of being ready to serve.

No money was paid for the publication of this story as news. There is not enough money in the banks to pay for such an item as news in that paper nor in the columns of the overwhelming majority of the American press.

Yet, it is more than likely that had the same correspondent sent to the same paper an exactly similar story telling how a local public utility had determined upon a service charge, or a form of rate based on scientific cost allocation, as the banks are doing; had he argued the case as he did for the banks, that copy would have undoubtedly wound up in the waste basket, labelled "propaganda."

What is the moral to this story?

Obviously, the direct answer is that the paper is not adverse to printing a story explaining why the banks propose to make a fair and just service charge, because banks are regulated solely for the protection of depositors and sometimes borrowers, and are not regulated as to service charges. Hence the demagogue seeking public office or political favor, and the agitator seeking employment to represent the customers in a rate proceeding, have not succeeded in making the publication of news favorable to bank service charges unpopular and dangerous to print.

A commentator says with truth that a bank's charges upon its customers are indirect and unseen, and therefore unlike the charges of a public utility, although neither has any source of revenue other than its public, even though the revenue may only come from the use of the money of depositors.

The argument that banks are not monopolies and that the public utilities are, cannot stand, for in the first place when all banks of a community agree to a service charge they are in effect a monopoly, while certainly under modern business and economic conditions no gas or electric or street railway company is a monopoly. They are subject to competition.

It strikes us that the solution of this apparent inequality in which similar problems of similar public service institutions, the banks and the utilities, are held by the press and the public today, can only be accomplished by a continuing program of education conducted by the utilities dealing with the problems of public utility service and their intimate relationship and absolute dependence upon a properly balanced rate for that service.

A former regulatory commissioner agrees with the writer that the most prosperous utilities, hence those best equipped to meet the demands for service, are those having such relations that they can go to the commission with a rate adjustment agreed upon in advance with the city council and the chamber of commerce. This can be true as a rule, however, only in the smaller cities.

A good deal can be done and is done in adequate representations to service clubs, chambers of commerce and like organizations. Something can be done through advertisements in the press, but no utility can hope for the open access to the news col-

umns of the press, such as the example above mentioned until it has established itself in its community—in the consciousness of the public it serves—as the fountain head, the authority and the last word, in every phase of the service it renders. There must be a regular and definite program of information. It must permeate every nook and cranny of the community, it must be the work-a-day gospel of every employee of the utility. It must be continuous and not sporadic. It must be persistent and not confined to the pendency of a particular rate case. It must originate with and be directed and inspired by a single responsible head—the chief executive of the organization.

Mr. Cortelyou Presents Inhalators to New York Hospitals

DR. WILLIAM SCHROEDER, JR., Commissioner of Hospitals in New York, N. Y., has announced a list of twelve city hospitals to which artificial respiratory machines costing $36,000 are to be assigned for use in reviving patients requiring artificial respiration. The machines are to be a gift to the city from George B. Cortelyou, President of the Consolidated Gas Company of New York.

Arrangements for the installation of the machines were made by Dr. D. J. Donovan, chief surgeon of the Police Department, and Thomas Shaughnessy, superintendent of resuscitation for the gas company, as a result of the Paul Brignetti case at Kings County Hospital recently, Commissioner Schroeder said.

In this case the police administered artificial respiration to Brignetti, who had attempted suicide by gas, 38½ hours before they succeeded in reviving him. Three squads of eight policemen worked alternately, and 125 tanks of oxygen were administered through an inhalator.

The case was believed to represent the longest time on record in which artificial respiration had been successfully administered. It was felt that it had demonstrated the advisability of providing means through which continued efforts for respiration could be made, Commissioner Schroeder said.

With the new machines it will be possible to continue respiration for indefinite periods, he added. Further, he explained, with the machines large numbers of men will not be necessary for the prolonged work.

One respiratory machine similar to the twelve to be installed now was given to the city by Mr. Cortelyou last April for a trial. It was installed in Bellevue Hospital and has proved satisfactory, according to Commissioner Schroeder. The machine was developed at Harvard University.

Announce 75 Cent House Heating Rate in Philadelphia

A HOUSE heating gas rate of 75 cents per thousand cubic feet, effective September first, has been approved by the Philadelphia Gas Commission, according to an announcement by Conrad N. Lauer, President of the Philadelphia Gas Works Co.

The new rate will be available for heating homes and other buildings along the company's mains. The service will be through a separate meter and on a special house heating contract.

Under this contract the customer will agree to use the service throughout the heating season from October to May, inclusive, at a minimum charge of $150 for the period, or $18.75 per month, which is the cost of 200,000 cu.ft. of gas for the season at the 75 cent rate, or 25,000 cu.ft. a month.

"The use of gas for heating homes and other structures," Mr. Lauer said, "is rapidly growing throughout the country. In Philadelphia there are now approximately 1300 installations and under the new rate these customers will be benefited to the extent of more than $100,000 a year.

"The healthfulness, cleanliness, and convenience of gas heating are generally recognized, and with the new rate it is now possible for the average family to use gas for heating at a cost not greatly in excess of the cost of other fuels, or at no greater cost when the advantages of the service are considered."

Research at the A. G. A. Laboratory

By R. M. CONNER

WHERE the giant mergers now under way in the gas industry will stop and what their effect will be on the future of the business are problems inviting the attention of every far-sighted gas engineer. While these activities will doubtless effect certain economies in operation, they will at the same time introduce new operating difficulties which must be met and solved satisfactorily. The American Gas Association's Committee on Engineering and Economic Survey of the Gas Industry, functioning largely through its different subcommittees of the Technical Section, is endeavoring to anticipate these new developments and, through various research agencies, to place in our engineers' hands sufficient information successfully to meet and solve them.

The Association's Laboratory, in conjunction with its appliance testing program, has under way three major research investigations which, when completed, should prove of great value to the gas business. Undoubtedly, one of the most important of these studies is that being conducted on mixed gases. This work is supervised by a committee headed by F. C. Weber, assistant vice-president of The Brooklyn Union Gas Co. The term "mixed gas research," unfortunately, is somewhat of a misnomer. Common kinds of manufactured gases are composed of about the same components, varying only in their proportions. Consequently, this work could be termed more accurately "An Investigation to Determine the Effects on Utilization caused by Variations in the Physical and Chemical Components of City Gases."

With new natural gas fields being discovered yearly and large quantities of this gas being transported hundreds of miles to our great industrial centers, it seems possible that the present supply of gas might be changed even in such large centers of population as Chicago and New York. Many of the large middle-western cities are already being served with natural gas. Transmission mains of five hundred miles or more are becoming quite common and it is only logical to assume that, before long, practically every large industrial center in the West will be supplied, at least partially, with this kind of gas.

It would also seem logical to assume that, inasmuch as natural gas is a very satisfactory fuel and in view of the fact that it can be piped such great distances readily, it would not be long before we should expect the

Some of the appliances used in mixed gas research

demise of many manufactured gas plants. In the writer's opinion, however, this will never generally take place for three reasons: First, the fuel requirements of the country are increasing at such a rapid rate that the supply of natural gas will probably always prove inadequate; second, there will always be certain industries which produce as a by-product a very satisafctory and usable gas; and third, it doubtless will be found economically impractical to pump and distribute such a high gravity gas beyond certain predetermined distances.

It is quite likely that many of the small and more or less obsolete manufactured gas plants will be abandoned. As a matter of fact, this is already taking place and is especially probable where such plants are located near large natural gas fields or larger and more efficient manufactured gas plants. A more likely development, however, is that the majority of modern manufactured gas plants will be remodeled to augment a supply of natural gas where available. Some of the probable uses for such plants will be cracking refinery oil gases and natural gas, and the production of low gravity, low heating value manufactured gases high in free hydrogen content.

As the nature of our supply becomes more varied, its utilization will require a more flexible gas. Natural gas and manufactured gases of extremely high hydrocarbon content can be made much more flexible by adding free hydrogen. Hydrogen, fortunately, also compensates for inerts by increasing the rate of flame propagation and offsetting the increased primary air injection caused by a heavier mixture. Consequently, we may expect the production of large quantities of this gas in the future. It is now being made experimentally without the production of objectionable quantities of carbon by injecting mixtures of steam and natural gas through a heated bed of coke in the usual type of water gas set.

Theories governing the successful mixing of gases are the foundation of a rather complex art which the Laboratory is endeavoring to simplify and coordinate in such a manner that they can be readily applied by any practical gas engineer. From present indications, many ideas now existing regarding the allowable percentage of inerts and minimum acceptable heating values are subject to revision. It is a fact that under certain conditions, at least, rather large percentages of inerts are advantageous. Low heating value gases, if composed of the proper constituents, often make a very satisfactory fuel. Industrial applications appear to be subject to the greatest restrictions. In

light of what has been said, it appears probable that most city gases of the future will be a mixture of many different kinds of commercial gases of which some type of natural gas will doubtless form a high percentage of the base load.

While the encouragement of water heating, refrigeration, house cooling, and certain kinds of industrial applications will improve our load curves, it is too much to expect that we will ever entirely eliminate our winter months peaks. This statement is best borne out by the progress which house heating is making all over the country. Consequently, a base load of natural and/or some manufactured gas will doubtless have to be augmented by blue gas, carburetted water, refinery oil, or cracked natural gas. Such practices will result in changes in specific gravity, heating value and, what is more important, chemical composition. Under these conditions, the Association's mixed gas research findings should prove exceedingly valuable.

One of the latest and perhaps most interesting studies to be initiated is the Association's new investigation of propane and butane. The initial objective is to determine the usefulness of such gases as enriching agents for lean types of manufactured gas, interchangeability of such mixtures with natural gas, and their value for straight carburetting purposes. It has already been proved, in a practical way at least, that

Apparatus used in the flame propagation research at the testing laboratory

Working on research

"greased air," or air enriched with propane, can be used quite satisfactorily to replace the product of some types of small manufactured gas plants or in communities where a supply of city gas is not available. This presupposes, of course, that appliances are properly adjusted to operate on such a fuel. It will be the Laboratory's function to determine in an experimental way what the practical limits for such mixtures are, also to investigate the mechanics of vaporizing these gases and their tendencies to condense under various conditions of temperature and pressure. It is also possible that later on this investigation may lead to experiments in reforming or cracking natural and refinery oil gases.

Coincident with the appliance approval requirement committee work, the Laboratory is also conducting about 15 separate investigations for the purpose of obtaining fundamental data on the performance of certain types of domestic gas appliances and their accessories. This work should result in many improvements in our present gas-burning equipment and also be of assistance to the manufacturer in a general way in bringing out new ideas. Furthermore, the Laboratory Managing Committee at its last meeting approved the conduct of certain types of research work for manufacturers, such activities to be paid for at actual cost, including such overhead as might logically be assigned to work of this nature. Since

(Continued on page 570)

Some Aspects of Modern Gas Condensing

By J. B. DRABELLE

THE process in gas manufacture known as condensing is one of the most important processes in the manufacture of gas. It may be simply stated to be a heat removal process of a heat exchange process or the transferring of heat from high heat levels, to low heat levels, or briefly a heat transfer. No matter how this process may be treated the high temperature of the gas coming from the machine is reduced to a lower temperature level, and during this process certain vapors of varying constituency condense and coalesce into a liquid. Condensing takes place in gas condensers in three ways: (a) radiation, (b) conduction, (c) convection. All three phenomena act in a gas condenser.

In considering any subject it is well always to first look at the substance to be handled in the treating apparatus, and we find that carburetted water gas consists of, and has the following approximate properties coming from the seal pot of the machine:

Item	Water Gas
Temperature	160°-200° F.
Water vapor	32%-78%
Tar and oily vapor	1%- 2%

This gives the characteristics of the gaseous material to be handled and we can see that a reduction to approximately 60 to 90° in terminal temperature is required before the gas can be passed further on in the purification processes of the works, also that the vapor content must be reduced to a minimum value, and likewise the tar and oily vapors to a minimum value, all to the end that the burden of work on the various pieces of apparatus further along in the purification cycle will be reduced to a minimum value.

In water gas plants insufficiently condensed gas will deposit oily tar in the oxide, impairing the purifying capacity and rendering frequent replacement of oxide necessary. In most plants where trouble of this kind is being experienced, the money that is actually being spent to replace spoiled oxide would be sufficient to pay back the installation cost of an adequate condensing plant in a short period of time, to say nothing of carrying the operating costs of such a condensing plant.

It should be remembered in considering the deposition of tar in purifier boxes that tar extraction is not the only answer. The gas must first be cooled to a sufficiently low temperature that the tar oils are condensed to a liquid form. In this state they are carried along as tar fog or tar mist.

If the gas is not sufficiently cooled, the tar extractors or Cottrell precipitators will take out such tar as is already liquefied, and further cooling after leaving the tar extractor will produce the additional liquefaction of tar which will be deposited in the oxide. Insufficient condensing is the main source of oxide trouble in most cases.

The installation of proper condensing facilities results in a reduction in back pressure troubles and smaller mains can be used or existing mains increased in capacity. Smaller exhausters may be used taking less power for operation, or existing exhausters may be run slower with savings in power and upkeep.

If a water gas condenser is installed before the relief holder, a holder of half the capacity can be used or existing small holders can be increased in working capacity, and total works storage increased as well.

Briefly to restate the problem again: We are required to reduce the temperature of gas, to reduce the water vapor content, and to reduce the tar and oily vapor content so that the gas can pass from the condenser either into the relief holder or, if coming from the relief holder, through the condenser to the exhauster and the subsequent processes in the works.

There are several methods of condensation:

Mr. Drabelle is with the Iowa Railway and Light Co., Cedar Rapids, Iowa.

a. Direct condensation. A good example of this process is the washer cooler, consisting of a vertical tank filled with wooden grids over which trickles the water. This solution is cooled in a pipe cooler similar to the condenser of a refrigerating plant.

b. Indirect condensation by some form of heat transfer apparatus in which the gas does not come in contact with the cooling medium. This process uses the tubular condenser.

There are several types of tubular condensers, the oldest form being the air-cooled type in which the gas surrounded the tubes and air by natural circulation passes up through the tubes cooled the gas. This apparatus was very cumbersome and costly due to a very low heat transfer co-efficient.

Another form of condenser (b) is the water-cooled tubular condenser that has been in the process of redesign over a period of many years. This has been built in two designs—water surrounding the tubes and the gas passing through the tubes—and the water passing through the tubes and the gas surrounding them. Obviously from the maintenance standpoint the latter form is preferred.

Another form (c) is the combination of air and water in which air passes up through the tubes of the condenser and a film of water passes down through the tubes, and the heat of the gas is tranferred through tubes, evaporating the water and the water absorbing the heat due to evaporation. Another form, little used and only under the most unusual conditions, is the mechanical refrigeration process. As this is so seldom used it will not come within the scope of this paper to discuss it.

There have been two schools of thought in gas manufacture so far as the process of gas condensing is concerned. One is the slow condensation process in which the temperature was stepped down gradually by certain increments of temperature in several condensers. This is a relic of the candle-power days and not much used in these days when B.t.u. values alone are dealt with. Such a process requires a very considerable investment in apparatus and is cumbersome and costly to operate and install. The newer schools of thought in gas manufacture, particularly where bituminous coal is used as generator fuel, advocate the "quick" or "shock" method of condensation. This was originated with our company by W. A. Pike, superintendent of Marshalltown works, who about twelve years ago conceived the idea of putting the gas condenser on the outlet of the machine and reduced the temperature suddenly, much to the horror of some of the old timers in the game. The "shock" method of condensation, however, has the advantage that when using bituminous coal as generator fuel, naphthalene is the one thing we do not need to fear. Several years of experience in our various and several works have taught us. This is the standard method of arrangement of apparatus which we employ in all of our gas works, namely, a large sized condenser on the outlet of the machine. We feel that it has the following advantages:

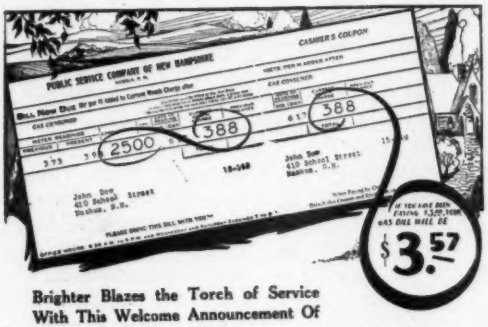
(1) We have never encountered naphthalene difficulties.

(2) We have reduced materially the amount of labor pumping drip pots at the inlet of the relief holders by condensing this drip where it properly belongs in a gas condenser, and it removes itself by gravity through the seal pot of the condenser.

(3) We have reduced the vapor content of the gas going into the relief holders; consequently we do not have a relief holder that is jumping up and down in its pit or tank. Such rapid motion, we think, adds considerably to emulsion troubles where drip is pumped into the pit holders as a means of storing it until the tar reclaiming apparatus can handle it.

(4) The water passing through these condensers is used for the heating of our storage holders during the winter time and we have not used a pound of steam for storage holder heating for many years, using entirely the waste heat content of the hot gases from the water gas machine for this purpose. In some of our works there is sufficient radiation from the storage holders so that they are used for cooling the condenser circulating water the year around. In other works this radiation is not sufficient and these have been equipped with cooling towers.

(Continued on page 571)



Brighter Blazes the Torch of Service
With This Welcome Announcement Of

Better Gas Rates for Nashua!

NEW GAS RATES

On your gas bill this month you will discover a change from the rates you have been paying for Gas service. If you have been using more than 2,000 cubic feet a month, your gas bill will show a reduction. This will mean that many customers will benefit by this immediate reduction.

The real importance of the new rate is that gas, the perfect servant, used to its best advantage in producing further comforts and conveniences in the home, is now available to EVERYONE at lower prices.

This new and attractive rate makes it easier to enjoy gas service in your home. Under this new rate you will be able to operate an Automatic Gas Water Heater at a cost of less than one half cent per gallon of steaming hot water. Under this new rate you will be able to heat you home with Gas, economically, efficiently, at a cost only slightly higher than you are now paying for unsatisfactory fuel. Under this new rate you will be able to cook breakfast for four persons for only 6c.

Gas is the perfect servant. Twenty-four hours a day, every day, it is at your instant service. It demands no storage space. It necessitates no advance expenditure; you pay for it only after you have used it. It is positively Clean—Quick—Safe. And it is more inexpensive than ever.

Gas appliances are extremely durable in construction, remarkably free from wear, repairs, and upkeep costs. Gas appliances are long-lived, noiseless, unobtrusive. Gas appliances are moderate in price, easy to pay for.

Come to our offices and see the newest applications of Gas as a fuel. Admire the beauty of the new models, their grace of design, their perfection of finish. Picture them in your home, eternally alert to increase your comfort, to add to your leisure, to improve your standard of living. All at a monthly cost which has always been small, and now will be smaller than ever.

Nothing that you buy costs so little as Gas. Nothing else gives so much in happiness.

66 E. Pearl St. Nashua, N. H.

PUBLIC SERVICE CO. OF N.H.

Nothing seems to be left unsaid in this newspaper advertisement on the new schedule of the Public Service Company of New Hampshire.

Readers, who are also customers, of course, can hardly hope to skip by the heading, "Better Gas Rates for Nashua," without stopping long enough to absorb the message.

THE ADVERTISIN

When a house
becomes a home . . .
that is, when there is the maximum of comfort with the minimum of effort.
You can heat your home with gas and get one of the conveniences of apartment life, retaining, at the same time the satisfaction of treading your own doorstep each evening.
Your Gas Company stores your fuel for you and at the turn of a tap delivers just that quantity of fuel which will give you the "Maximum of Comfort."
Write for the booklet "COMFORT" which will tell you more of this wonderful aid to brighter living
The Consumers' Gas Company
Et. Richard St. E.
732 Danforth Ave.
779 Lake Shore Road, New Toronto

Interesting treatment of newspaper advertisement used by the Consumers Gas Company in Toronto. "When a House Becomes a Home" is appealing to all who take interest in their homes —and who does not?

TISING EXHIBITION

Another advertisement in a series which is appearing in the financial pages of some of the leading daily papers of the country.

Let's Talk Frankly—

about
this important subject of

GARBAGE

Household incineration by Gas is designed for people who take pride in the cleanliness of . . their homes . .

"Not knowing" the only safe and sure way of keeping the kitchen, basement, and premises free from table waste and refuse has brought disease, fire and uncleanliness to many a home, otherwise equipped with all the latest conveniences. Even under the best conditions of city garbage collection, decaying waste and rubbish is a fire hazard and a breeding place for flies. Under less efficient circumstances, it results in unsightly lanes and streets, and, in the home, a constant odor of decaying foods.

Ordinary pails and alley cans are the only ones who would like to see the way many people still dispose of garbage today.

Burn it the clean way

Fire, the great purifying agent, destroys all refuse in a Gas Incinerator in a few minutes, under controlled conditions. Purifying and smoke consuming devices keep all odors and by-products from leaving the container. All that remains is a small quantity of sterilized white ash that makes a wonderful mulch and fertilizer for your flowers, shrubs or lawns.

Anybody—man, woman or child—can operate a Gas Incinerator. It is safe, automatic, convenient, and as easy to install as a kitchen range or refrigerator. Nothing to tear out or build. The Gas Incinerator makes possible a clean and orderly basement—another room without remodeling!

Set an example of cleanliness for your neighborhood

No matter how good a housekeeper you have been, you can improve the appearance of your home by twenty-five per cent. We will give you an opportunity of proving it for yourself, we will install a Gas Incinerator in Your Basement on 30-days' free trial. Send the coupon today. It entitles you to free information and advice cheerfully given without any obligation whatever.

NEW YORK GAS & ELECTRIC COMPANY
EUGENE H. ROSENQUEST, President
WESTCHESTER SQUARE WESTCHESTER 9400

CENTRAL UNION GAS COMPANY
E. B. BARNITZ, President
618 COURTLANDT AVENUE

We are indebted to the New Yorker *for the following story of the young lady who went to spend a week with her newly acquired and beloved husband:*

They occupied a Connecticut farm which a friend agreed to lend them for an hallowed an interlude. The plan worked to an extent the mother of the bride, who suspected her daughter of great ignorance in the matter of cooking and dusting. At the end of the week, the pair returned to town, apparently still on speaking terms with each other.

"Well, how did it go?" the mother asked her daughter when they were alone.

"Swell," said the young lady, "I got along all right with everything except the garbage. There was no garbage man, and I didn't know what to do with it."

"Well," said her mother, eyeing her sharply, "what did you do with it?"

"Tied it up and brought it back to town," replied the proud child.

MAIL THIS COUPON

BZ-9

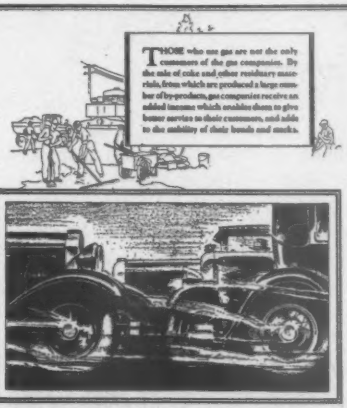
Gentlemen:
Please send me further details about the Gas Incinerator, and particularly your offer of 30 Days' Free Trial Installation. This request is, of course, without any obligation to me.

Name.....

Address.....

City.....

Gas incinerator sales should take a decided jump in New York City as a result of advertisements such as this one.



THOSE who use gas are not the only customers of the gas companies. By the sale of coke and other residuary materials, from which are produced a large number of by-products, gas companies receive an added income which enables them to give better service to their customers, and adds to the stability of their bonds and stocks.

Smoothly Rolling Along—Over By-products of the Gas Plant

To the laying of good pavements may be credited the wide-spread use of automobiles. There was not much of pleasure in motoring, when the condition of streets alternated between days of deep-lying dust and days of mud-caked ruts. Prominent among the materials from which street pavements are made are by-products of the Gas Manufacturing process—an important one, and a constantly increasing one, for these products.

THOMPSON ROSS & CO.
INCORPORATED
ESTABLISHED 1918
Underwriters and Distributors of Public Utility and Industrial Securities
29 South La Salle Street
CHICAGO
NEW YORK BOSTON SAN FRANCISCO

GAS HEAT . . .
and Food Products

Gas Heat is indispensable in the manufacture and preparation of food products . . . from banana-ripening to coffee-roasting; from meat-smoking to packaging. *If it's done with heat, you can do it better with gas.*

A note on your business stationery brings you a copy of the free book, "Industrial Gas Heat." Write for it today.

AMERICAN GAS ASSOCIATION
420 Lexington Avenue, New York

If It's Done with Heat,
You Can Do It Better with Gas

Another advertisement in the program of industrial gas publicity sponsored by the American Gas Association.

Laboratory Increases Its Activities

EARLY in August the Association's Testing Laboratory at Cleveland, Ohio, began approval tests on gas-heated clothes dryers and portable incinerators. With the addition of these two types of appliances, the Laboratory's activity now practically covers the domestic gas appliance field.

The approval requirements for clothes dryers were prepared by a committee headed by C. A. Luther, assistant manager of the Peoples Gas Stores, Inc., Chicago, Ill. His committee includes representatives of gas companies and of most of the larger clothes dryer manufacturers of the country. Inasmuch as no test codes were available, it was necessary for this committee to have a great deal of original research performed as a basis for preparing their performance requirements.

While the construction requirements for such standard parts as burners, pilots, manifolds and gas cocks are essentially the same as those for other appliances, there are a number of new features. The use of wood in dryer construction has been somewhat limited; wooden clothes rods, for example, are not permissible. The direct-fired clothes dryer has also been definitely ruled against. Thermostats or temperature limiting devices are required to prevent possible scorching of clothes when dried and protective screens must also be provided to prevent clothes from falling onto the burner box and catching fire.

The performance requirements specify tests for burners, pilot operation, pressure drop, leakage of the assembly manifold, gas cocks, and fire hazard. In addition, requirements have been specified limiting the allowable temperature variations within the drying chamber. An approved clothes dryer must also possess the ability to reach a drying temperature within twenty minutes after having been lighted. A fair drying efficiency is also required.

The approval requirements for portable incinerators were prepared by a committee headed by J. D. Preble, gas heating engineer of the Public Service Company of Northern Illinois, Chicago, Ill. As in the case of the Clothes Dryer Requirements Committee, the manufacturer members of the Incinerator Committee represent most of the larger gas incinerator companies of the country.

While certain construction requirements are similar to those of other appliance codes of the Association, this committee, as in the case of the Clothes Dryer Committee, found itself faced with the necessity of drawing up many new tests and requirements. For example, incinerators must possess a fair incinerating efficiency. The development of this test required a great deal of original research on the part of the Laboratory. A comprehensive leakage test was also felt to be essential, as this item has always been one of the most difficult functions to attain in any kind of garbage incineration.

These new standards, as in the case of all other requirements, have been termed minimum requirements for safe operation, satisfactory performance, and substantial and reasonably durable construction. In their preparation, the necessity of providing every reasonable opportunity for manufacturers to improve such appliances and embody individuality in their design and construction was recognized. It has been the constant aim of all of the committees operating under the supervision of the A. G. A. Approval Requirements Committee to avoid the preparation of any requirements which will retard progress. It is hoped that some of these new appliances will be approved in time for exhibit at the annual convention in October.

Mrs. James W. Dunbar, wife of United States Representative Dunbar, died recently at her home in New Albany, Ind.

Mr. Dunbar is extremely well-known to the gas industry. He was at one time secretary of the Western Gas Association, secretary of the American Gas Institute, and also a director of the A. G. I.

Data of Statistical Department Covers First Six Months of 1929

By PAUL RYAN

A REPORT of the Statistical Department of the American Gas Association shows that sales for a group of 91 companies, representing the major portion of the gas industry, registered an increase of 9 per cent during the first six months of 1929. As of June 30, 1929, the customers of these companies aggregated 9,254,000, an increase of 2.5 per cent over June 30, 1928. This provides substantial proof of the continued progress of the gas industry.

For the six months period, the per cent increase in total sales registered by the reporting companies in the various geographic regions was as follows:

New England	5.6 per cent
Middle Atlantic	1.2 per cent
South Atlantic	2.0 per cent
East North Central	9.9 per cent
West North Central	2.9 per cent
South Central and Mountain	54.9 per cent
Pacific Coast	20.8 per cent

(Continued on page 550)

Statistical Department, American Gas Association

COMPARATIVE STATISTICS OF 91 GAS COMPANIES FOR JUNE, 1929—TOTAL UNITED STATES
(91 COMPANIES)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
(1) Customers	9,254,360	9,028,247	2.5	See June		
(2) Gas Sales (MCF)	34,126,124	31,946,553	6.8	224,758,142	206,089,835	9.1
(3) Revenue ($)	32,795,421	31,864,368	2.9	212,336,815	203,621,040	4.3
(4) Gas Produced (MCF)						
(a) Water Gas	11,795,649	14,334,549	—17.7	93,623,100	101,450,918	—7.7
(b) Coal Gas	2,914,567	3,163,808	—7.9	18,028,467	20,353,961	—11.4
(c) Coke Oven Gas	3,309,976	2,576,196	28.5	19,910,090	14,615,798	36.2
(d) Oil Gas	2,180,429	1,980,784	10.1	17,331,937	15,047,386	15.2
(e) Total Gas Produced	20,200,621	22,055,337	—8.4	148,893,594	151,468,063	—1.7
(5) Coke Oven Gas Purchased	8,229,536	6,119,888	34.6	47,007,776	37,458,540	25.5
(6) Total Mfd. Gas Produced & Purchased	28,430,157	28,175,225	0.9	195,901,370	188,926,603	3.7
(7) Natural Gas Purchased	6,272,145	4,314,682	45.4	47,691,845	31,587,478	51.0
(8) Total Gas Produced & Purchased	34,702,302	32,489,907	6.8	243,593,215	220,514,081	10.5

GROUP A. NEW ENGLAND STATES (21 COMPANIES)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
Customers						
Domestic	945,517	925,269	2.2			
Householeating	3,720	2,220	47.3			
Industrial and Commercial	30,510	28,450	7.2	See June		
Miscellaneous	129	125	——			
Total (20 Companies)	979,876	956,064	2.5			
Grand Total (21 Companies)	1,013,438	989,826	2.4			
Gas Sales (MCF)						
Domestic	2,123,619	2,087,093	1.8	11,818,679	11,621,264	1.7
Householeating	35,765	26,811	33.4	1,297,729	795,369	63.2
Industrial and Commercial	528,370	508,967	3.8	3,350,256	3,161,345	6.0
Miscellaneous	18,200	19,627	——	153,343	161,724	——
Total (20 Companies)	2,705,954	2,642,498	2.4	16,620,007	15,739,702	5.6
Grand Total (21 Companies)	2,788,977	2,725,884	2.3	17,139,513	16,236,808	5.6
Gas Revenue (Dollars)						
Domestic	2,717,951	2,671,917	1.7	15,104,940	14,828,413	1.9
Householeating	29,400	21,914	34.2	1,041,392	639,903	62.8
Industrial and Commercial	513,334	512,581	0.2	3,271,344	3,181,079	2.8
Miscellaneous	16,361	21,989	——	126,086	154,771	——
Total (20 Companies)	3,277,046	3,228,401	1.5	19,543,762	18,804,166	3.9
Grand Total (21 Companies)	3,374,171	3,326,765	1.4	20,128,008	19,375,350	3.9
Gas Produced and Purchased (MCF)						
Gas Produced						
(a) Water gas made	1,083,478	1,468,504	—26.2	7,878,952	8,991,632	—12.4
(b) Coal gas made	657,124	732,356	—10.3	3,863,558	4,498,631	—14.1
(c) Coke Oven gas	244,749	228,739	7.0	1,416,938	1,401,710	1.1
(d) Total gas produced	1,985,351	2,429,599	—18.3	13,159,448	14,891,973	—11.2
Coke Oven Gas Purchased	914,935	452,823	102.1	5,557,122	2,887,697	92.4
Total Gas Produced & Purchased	2,900,286	2,882,422	0.6	18,716,570	17,779,670	5.3

Note: Of the twenty-one reporting companies twenty segregate customers, sales and revenue monthly and one reports only totals. The data shown above for domestic, householeating and industrial-commercial classifications are based on the reports of the twenty companies which segregate returns.

GROUP B—MIDDLE ATLANTIC STATES—(22 COMPANIES)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
(1) Customers	3,712,128	3,653,870	1.6	See June		
(2) Gas Sales (MCF)	11,067,294	11,000,182	0.6	71,654,254	70,801,531	1.2
(3) Revenue ($)	12,697,911	12,648,805	0.4	81,470,472	80,985,775	0.6
(4) Gas Produced (MCF)						
(a) Water Gas	5,995,619	7,046,587	—14.9	47,983,463	51,575,803	—7.0
(b) Coal Gas	612,933	793,938	—22.8	4,145,752	5,509,325	—24.8
(c) Coke Oven Gas	1,825,037	1,219,300	49.7	11,017,997	6,987,775	57.7
(d) Total Gas Produced	8,433,589	9,059,825	—6.9	63,147,212	64,072,903	—1.5
(5) Coke Oven Gas Purchased	2,171,976	1,698,575	27.9	13,042,737	10,517,412	24.0
(6) Total Mfd. Gas Produced & Purchased	10,605,565	10,758,400	—1.4	76,189,949	74,590,315	2.1

GROUP C—EAST NORTH CENTRAL STATES—(26 COMPANIES)

(1) Customers	2,351,936	2,251,723	4.5	See June		
(2) Gas Sales (MCF)	9,668,868	8,913,187	8.5	58,687,657	53,385,243	9.9
(3) Revenue ($)	9,094,366	8,536,254	6.5	54,592,411	51,023,985	7.0
(4) Gas Produced (MCF)						
(a) Water Gas	2,857,443	3,418,238	—16.4	23,287,891	22,463,811	3.7
(b) Coal Gas	1,480,974	1,381,938	7.2	8,948,317	8,540,850	4.8
(c) Coke Oven Gas	1,079,628	964,048	12.0	6,470,464	5,130,973	26.1
(d) Oil and Natural Gas	1,399	271	——	4,603	1,947	——
(e) Total Gas Produced	5,419,444	5,764,495	—6.0	38,711,277	36,137,581	7.1
(5) Coke Oven Gas Produced	4,428,881	3,336,083	32.8	23,997,871	20,450,416	17.4
(6) Total Mfd. Gas Produced & Purchased	9,848,325	9,100,578	8.2	62,709,148	56,587,997	10.8
(7) Natural Gas Purchased	69,173	69,077	0.1	445,424	460,291	—3.2
(8) Total Gas Produced & Purchased	9,917,498	9,169,655	8.2	63,154,572	57,048,288	10.7

GROUP D—WEST NORTH CENTRAL STATES (6 COMPANIES)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
1) Customers	422,143	421,595	0.1	See June		
(2) Gas Sales (MCF)	1,318,171	1,360,885	—3.1	8,606,705	8,360,990	2.9
(3) Revenue ($)	1,306,243	1,327,522	—1.6	8,228,296	8,053,116	0.9
(4) Gas Produced (MCF)						
(a) Water Gas	830,912	845,248	—1.7	6,035,112	5,689,510	6.1
(b) Coal Gas	134,372	116,370	6.9	882,476	915,424	—3.6
(c) Coke Oven Gas	160,562	164,109	—2.2	1,004,691	1,095,340	—9.2
(d) Total Gas Produced	1,125,846	1,125,727	—0.1	7,922,279	7,700,274	2.9
(5) Coke Oven Gas Purchased	46,152	49,420	—6.6	367,030	304,201	20.7
(6) Total Mfd. Gas Produced & Purchased	1,171,998	1,175,147	—2.0	8,289,309	8,004,475	3.6

GROUP E—SOUTH CENTRAL AND MOUNTAIN STATES (4 COMPANIES)
(Includes 3 Companies which have changed over to Natural Gas)

(1) Customers	199,288	191,958	3.8	See June		
(2) Gas Sales (MCF)	1,133,614	657,253	72.5	7,136,170	4,606,518	54.9
(3) Revenue ($)	627,266	673,715	—6.9	4,337,301	4,666,001	—7.1
(4) Gas Produced (MCF)						
(a) Water Gas	31,900	535,261	—94.1	221,035	3,895,257	—94.3
(b) Coal Gas	29,164	139,206	—79.1	188,364	889,731	—78.8
(c) Total Gas Produced	61,064	674,467	—90.0	409,399	4,784,988	—91.5
(5) Natural Gas Purchased	1,411,478	20,322	——	8,743,166	251,452	——
(6) Total Gas Produced & Purchased	1,472,542	694,789	111.94	9,152,565	5,036,439	81.7

GROUP H—SOUTH ATLANTIC STATES (7 COMPANIES)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
(1) Customers	400,440	391,446	2.3	See June		
(2) Gas Sales (MCF)	1,666,326	1,632,177	2.1	11,582,204	11,355,386	2.0
(3) Revenue ($)	1,565,847	1,567,066	0.1	10,829,532	10,770,975	0.5
(4) Gas Produced (MCF)						
(a) Water Gas	978,762	1,004,881	—2.6	8,070,001	8,740,959	—7.7
(5) Coke Oven Gas Purchased	667,592	582,987	14.5	4,043,016	3,298,814	22.6
(6) Total Mfd. Gas Produced and Purchased	1,646,354	1,587,868	3.7	12,113,017	12,039,773	0.6

GROUP I—PACIFIC COAST STATES (5 COMPANIES)
(Includes 2 companies distributing natural gas)

1) Customers	1,154,987	1,127,829	2.4	See June		
(2) Gas Sales (MCF)	6,482,874	5,656,985	14.6	49,951,639	41,343,359	20.8
(3) Revenue ($)	4,129,617	3,784,241	9.1	39,750,795	28,745,838	13.9
(4) Gas Produced (MCF)						
(a) Water Gas	17,535	15,830	10.8	146,646	93,946	56.1
(b) Oil Gas	2,179,030	1,980,513	10.0	17,327,334	15,045,439	15.2
(c) Total Mfg. Gas Produced	2,196,565	1,996,343	10.0	17,473,980	15,139,385	15.4
(5) Natural Gas Purchased	4,791,494	4,225,283	13.4	38,503,255	30,875,735	24.7
(6) Total Gas Purchased and Produced	6,988,059	6,221,626	12.3	55,977,235	46,015,120	21.7

COMPARATIVE STATISTICS OF THE GAS INDUSTRY IN THE STATE OF MASSACHUSETTS FOR JUNE, 1929

(Data reported by 11 Companies whose sales constitute 81% of total gas sales in Massachusetts)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
Customers						
Domestic	602,721	593,580	1.5			
Householeating	2,669	1,554	71.8			
Industrial and Commercial	17,980	15,808	13.7			
Miscellaneous	10	10	——	See June		
Total (10 Companies)	623,380	610,952	2.0			
Grand Total (11 Companies)	656,942	644,712	1.9			
Gas Sales (MCF)						
Domestic	1,299,325	1,294,292	0.4	7,319,031	7,294,263	0.3
Householeating	21,532	15,886	35.5	853,064	530,345	60.9
Industrial and Commercial	289,835	298,898	—3.0	1,866,826	1,837,671	1.6
Miscellaneous	15,789	17,169	——	133,429	139,848	——
Total (10 Companies)	1,626,481	1,626,245	0.1	10,172,350	9,802,129	3.8
Grand Total (11 Companies)	1,709,504	1,709,632	—0.1	10,691,885	10,299,270	3.8
Gas Revenue (Dollars)						
Domestic	1,659,004	1,659,142	—0.1	9,321,497	9,316,897	0.1
Householeating	17,500	12,439	40.7	684,377	419,758	63.0
Industrial and Commercial	295,178	313,297	—5.8	1,932,232	1,929,543	0.1
Miscellaneous	13,742	15,215	——	97,382	109,304	——
Total (10 Companies)	1,985,424	2,000,093	—0.7	12,035,488	11,775,504	2.2
Grand Total (11 Companies)	2,082,549	2,098,456	—0.8	12,619,734	12,346,688	2.2
Gas Produced and Purchased (MCF)						
Gas Produced						
(a) Water Gas Made	781,366	848,117	—7.9	5,638,259	5,372,036	5.0
(b) Coal Gas Made	518,468	477,662	8.5	2,992,428	2,930,820	2.1
(c) Total Gas Produced	1,299,834	1,325,779	—2.0	8,630,687	8,302,856	4.0
Coke Oven Gas Purchased	478,685	452,823	5.7	2,919,585	2,887,697	1.1
Total Produced and Purchased	1,778,519	1,778,602	—0.1	11,550,272	11,190,553	3.2

Note: Of eleven reporting companies ten segregate customers, sales and revenue monthly and one reports only totals. The data shown above for domestic, householeating and industrial-commercial classifications are based on the reports of the ten companies which segregate returns.

COMPARATIVE STATISTICS OF THE GAS INDUSTRY IN THE STATE OF ILLINOIS FOR JUNE, 1929

(Data reported by 7 companies whose sales constitute 78% of the total gas sales in Illinois)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
Customers						
Domestic	1,072,877	1,047,433	2.4			
Householeating	8,063	6,280	26.3			
Industrial and Commercial	64,663	63,367	2.1	See June		
Miscellaneous	179	170	——			
Total (6 Companies)	1,145,782	1,117,250	2.5			
Grand Total (7 Companies)	1,151,121	1,122,377	2.6			
Gas Sales (MCF)						
Domestic	2,853,739	2,759,441	3.4	17,006,200	16,209,192	4.9
Householeating	94,836	66,896	41.8	1,984,092	1,580,016	25.6
Industrial and commercial	1,407,918	1,234,184	14.1	8,136,584	7,228,535	12.6
Miscellaneous	9,216	9,113	——	70,805	65,142	——
Total (6 companies)	4,365,709	4,069,634	7.3	27,197,681	25,082,885	8.4
Grand Total (7 companies)	4,376,076	4,079,444	7.3	27,252,904	25,133,737	8.4
Gas Revenue (Dollars)						
Domestic	3,061,703	2,969,849	3.1	18,139,537	17,615,331	3.0
Householeating	81,052	55,605	45.7	1,560,330	1,243,790	25.5
Industrial and Commercial	1,052,038	956,031	10.0	6,054,281	5,873,869	3.1
Miscellaneous	5,803	5,890	——	42,858	39,548	——
Total (6 companies)	4,200,594	3,987,375	5.4	25,797,006	24,772,538	4.1
Grand Total (7 companies)	4,217,134	4,003,459	5.3	25,886,768	24,860,084	4.1
Gas Produced and Purchased (MCF)						
Gas Produced—						
(a) Water gas made	1,076,925	1,746,666	—38.3	10,313,288	12,502,329	—17.6
(b) Coal gas made	50,872	71,487	—28.8	301,964	472,811	—36.1
(c) Coke oven gas made	814,284	716,423	13.7	4,949,604	3,683,514	34.4
(d) Total gas produced	1,942,081	2,534,576	—23.4	15,564,856	16,658,654	—6.6
Coke Oven Gas Purchased	2,538,855	1,614,702	57.2	13,546,724	10,095,870	34.2
Total Mfg. Gas Produced and Purchased	4,480,936	4,149,278	8.0	29,111,580	26,754,524	8.8
Natural Gas Purchased	3,830	5,952	—35.8	26,048	37,745	—31.0
Total Gas Produced and Purchased	4,484,766	4,155,230	7.9	29,137,628	26,792,269	9.2

Note: Of the seven reporting companies, six segregate customers, sales and revenue while one company reports only totals. The data shown for the domestic, householeating, and industrial—commercial classifications are based only on the reports of the six companies which segregate items.

COMPARATIVE STATISTICS OF THE GAS INDUSTRY IN THE STATE OF MICHIGAN FOR JUNE, 1929

(Data reported by 4 companies whose sales constitute 90% of total sales in Michigan)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
Customers						
Domestic	593,917	549,650	8.1			
Householeating	1,026	673	52.5			
Industrial and Commercial	6,283	5,289	18.8			
Total	601,226	555,612	8.2			
Gas Sales (MCF)						
Domestic	2,065,450	1,929,535	7.0	12,245,117	11,115,736	10.2
Householeating	27,657	20,628	34.1	472,596	297,064	95.1
Industrial and Commercial	805,248	695,392	15.8	4,970,252	4,132,356	20.3
Miscellaneous	515	1,089	——	4,145	5,902	——
Total	2,898,870	2,646,644	9.5	17,692,110	15,551,058	13.8
Gas Revenue (Dollars)						
Domestic	1,916,101	1,788,364	7.1	11,288,356	10,250,095	10.1
Householeating	22,148	15,581	42.2	353,209	218,085	62.0
Industrial and commercial	586,162	508,952	15.2	3,568,287	3,027,333	17.9
Miscellaneous	2,673	3,660	——	18,090	22,447	——
Total	2,527,086	2,316,557	9.1	15,227,944	13,517,960	12.7
Gas Produced and Purchased						
Gas Produced (MCF)						
(a) Water Gas made	1,070,256	808,279	32.4	7,318,597	5,206,899	40.6
(b) Coal Gas made	826,573	787,958	4.9	5,032,278	4,840,828	3.9
(c) Other Gas made	254	271	—6.3	1,618	1,947	—16.9
(d) Total Gas Produced	1,897,083	1,596,508	18.8	12,352,493	10,049,674	22.9
Coke Oven Gas Purchased	1,010,415	1,073,367	—5.9	5,924,200	6,017,666	—1.6
Total Produced and Purchased	2,907,498	2,669,876	8.9	18,276,693	16,067,341	13.8

COMPARATIVE STATISTICS OF THE GAS INDUSTRY IN THE STATE OF CONNECTICUT FOR JUNE 1929

(Data reported by 6 companies whose sales constitute 80% of total gas sales in Connecticut)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
Customers						
Domestic	219,288	212,184	3.4			
Householeating	495	225	120.0			
Industrial & Commercial	7,960	7,865	1.2	See June		
Miscellaneous	119	115	——			
Total	227,862	220,389	3.4			
Gas Sales (MCF)						
Domestic	531,584	499,570	6.4	2,886,496	2,721,808	6.1
Householeating	6,473	3,678	76.0	203,425	93,890	116.7
Industrial & Commercial	152,548	137,823	10.7	916,088	825,032	11.0
Miscellaneous	1,787	1,726	——	13,712	14,151	——
Total	692,392	642,797	7.7	4,019,721	3,654,881	10.0
Gas Revenue (Dollars)						
Domestic	687,707	645,602	6.5	3,734,218	3,495,193	6.8
Householeating	5,911	3,695	60.0	169,719	84,608	100.6
Industrial & Commercial	143,917	135,846	5.9	853,205	813,685	4.9
Miscellaneous	1,413	1,319	——	10,425	10,600	——
Total	838,948	786,462	6.7	4,767,567	4,404,086	8.3
Gas Produced and Purchased (MCF)						
Gas Produced—						
(a) Water gas made	228,818	500,870	—54.3	1,525,035	2,903,155	—47.5
(b) Coal gas made	31,382	150,947	—79.2	195,312	966,816	—79.8
(c) Total gas produced	260,200	651,817	—60.1	1,720,347	3,869,971	—55.6
Coke Oven Gas Purchased	579,820	——	——	2,637,537	——	——
Total Gas Produced & Purchased	696,450	651,817	6.9	4,357,884	3,869,971	12.6

The Middle Atlantic regions continued to show a relatively smaller increase than other sections. The South Central and Mountain States show an abnormally high increase due to the fact that three of the reporting companies now distribute natural gas and formerly sold manufactured gas.

In California, Connecticut, Illinois, Michigan, and Wisconsin sales for the first six months were far ahead of the corresponding period of last year. In all sections of the country, the largest gains were made in industrial-commercial and house heating sales.

The reports of the 91 companies indicate that the amount of by-product coke oven gas being distributed by the gas industry is rapidly increasing while the quantity of carburetted water gas produced is gradually declining. Data on gas produced and purchased for distribution by

(Continued on page 574)

The Monthly Tabloid—Personal and Otherwise

P. J. Naschold

Paul J. Naschold has been appointed sales manager of the New Haven Gas Light Co., New Haven, .Conn., .effective immediately, according to announcement made by H. R. Sterrett, vice-president and general manager of the company. He succeeds A. R. Burr, who becomes the superintendent of stores.

Mr. Naschold, who was born in Boston in 1885, has had broad experience in public utility sales promotion and service work. He comes to New Haven from Philadelphia, where he had been sales supervisor for the Philadelphia Gas Works Co. He began his business career as a member of the sales force of the Philadelphia company in 1910. Later he was sales manager of the Nashville Gas & Heating Co., Nashville, Tenn., the American Gas Co., Philadelphia and the Rockford Gas Light & Coke Co., Rockford, Ill.

F. J. Schafer, general manager of the Southern California Gas Co., Los Angeles, Calif., with Mrs. Schafer, returned from a European tour on the record-breaking voyage of the Mauretania on August 8.

Mr. Schafer was an official representative of the American Gas Association at the annual convention of the German Gas and Water Association in Berlin, and was greatly impressed with the gas exhibition which has attracted so many European and American visitors during the summer.

Frank A. Leach, first vice-president and general manager of the Pacific Gas and Electric Co., San Francisco, Calif., has retired, according to announcement made recently. Paul M. Downing has been elected as his successor.

C. G. Eichelberger has been appointed assistant to President H. C. Blackwell of The Union Gas and Electric Co., Cincinnati, Ohio. Mr. Eichelberger has been with the company since 1913.

A. G. Butler, general superintendent of construction for the Louisville Gas and Electric Company, has been promoted to manager of the Pittsburgh Branch of the construction department of the Byllesby Engineering and Management Corp., Chicago. He succeeds W. G. Jens, who has been appointed operating manager of the Duquesne Light Co. of Pittsburgh.

Mr. Butler will be succeeded by G. R. Armstrong, who has been assistant superintendent of construction since 1922.

W. H. Arnold, formerly assistant sales manager of the Pittsburgh Valve, Foundry & Construction Co., has been appointed general sales manager, succeeding C. A. Anderson, Jr., who became president of the company on March 1.

Mr. Arnold's association with the company dates back to 1905. Since 1917, he has been engaged in sales activity.

Announcement has been made of the marriage of Thomas Johnson Strickler, vice-president and general manager of the Kansas City Gas Co., Kansas City, Mo., to Miss Margaret Jane Armstrong, on August 8, at Chicago, Ill.

Thomson King has resigned his position as vice-president of the Peerless Heater Co., Boyertown, Pa., and is now assistant to the manager, new business department, Consolidated Gas Electric Light & Power Co. of Baltimore. Mr. King has been active in American Gas Association affairs and has served on a number of committees concerned with industrial gas and house heating matters.

W. P. McCoy

William P. McCoy has been appointed general sales manager of the Judelson Dryer Corp., Moundsville, W. Va.

Mr. McCoy was formerly sales manager of The Cleveland Gas Burner and Appliance Co., Cleveland, Ohio, and for three years was sales manager of the gas range division of Abendroth Bros., Port Chester, N. Y. Prior to his connection with the latter company he was, for twelve years, on the home office sales promotion staff of the Welsbach Co., Gloucester, N. J.

Howard Bruce, of Baltimore, Md., was recently elected chairman of the board of directors of the Worthington Pump and Machinery Corporation. Mr. Bruce, who has been a member of the board of directors for the past eight years and is very well known in the gas industry, is connected with a number of other industrial enterprises. For more than a year he has been chairman of the board of directors of the Bartlett Hayward Company, having previously held the positions of general manager, vice-president, and President in that company.

Mr. Bruce is also a director of the American Light and Traction Co., the United States Hoffman Corp., and the Safe Deposit and Trust Co. of Baltimore.

R. C. Cornish

Ross C. Cornish, of Philadelphia, has resigned from the U. G. I. organization to become chief engineer, gas division, Semet-Solvay Engineering Corp., effective September 1. His headquarters will be at 40 Rector Street, New York City.

Mr. Cornish, who was graduated from the University of Wisconsin in 1897, has had broad experience in the gas industry. He began his career as superintendent of distribution for the Milwaukee Gas Light Co., and later was assistant superintendent of the coal and water gas plant. In 1900, he became superintendent of operations and distribution for the Racine Gas Light Co. and three years later returned to Milwaukee as assistant engineer.

In 1908, Mr. Cornish became manager of the St. Joseph (Mo.) Gas Company and in 1910, chief engineer of the American Gas Co., Philadelphia. When the American Gas Company was acquired by U. G. I. in 1925, he was appointed assistant to the vice-president in charge of engineering and development.

While with the American Gas Co., Mr. Cornish was also engaged in consulting work for the Old Colony Gas Co., Weymouth, Mass., and the Panama-Colon Gas Co., at Panama, and on report and valuation work and the preparation of data used in various rate cases.

Mr. Cornish is a member of the A. G. A. and in 1925 was chairman of its Technical Section.

George H. Baird, operating engineer for the natural gas division of The Empire Companies, Bartlesville, Okla., has been chosen to succeed Burt Bay as superintendent of operations for the Cities Service Gas Co.

F. R. Frye, chief clerk to the general superintendent in Oklahoma for the oil production division of The Empire Companies, has resigned to accept appointment as chief of the Michigan Conservation Department, with headquarters at Lansing, Mich.

B. C. Spicer, of the Consolidated Gas Electric Light and Power Co., of Baltimore, Md., is now heating engineer with the Atlantic Gas Co., Philadelphia, Pa.

Edward Graves Pratt, Jr.

EDWARD GRAVES PRATT, JR., son of Edward G. Pratt, well-known figure in the gas industry, died on July 11, following an operation.

He was born at North Attleboro, Mass., January 20, 1885. Went with his parents to Des Moines, Iowa, at two years of age, and lived there for 16 years. During his school life there he attended the public schools of Des Moines, and later spent two years at the Culver Military Academy, and two years at Armour Institute, Chicago, Ill. After leaving school he was employed at various periods by the Milwaukee Gas Light Co., St. Paul Gas Light Co., and Spokane Gas Co.

Later on, or during the period of the World War, he was engaged with his father in the gas oil business and the manufacture of toluol and benzol for the government with offices in the Peoples Gas Building, Chicago.

In 1920 Mr. Pratt came to Newark, New Jersey, and established the Motor List Company, residing at East Orange, N. J., which has since been his place of business and residence.

He was taken ill on July 4, and was removed to the Homeopathic Hospital, where an operation for appendicitis was performed. Other complications arose, the result of which was that he passed away Thursday, July 11, at the age of 44 years, six months.

James T. Hutchings

J. T. Hutchings

JAMES T. HUTCHINGS, vice-president of The United Gas Improvement Co., Philadelphia, Pa., in charge of engineering development, died suddenly on August 17, at Ocean City, N. J. Heart disease was the cause.

Mr. Hutchings had returned on August 13 from a two months' trip abroad and apparently was in his usual health. He had been in his office in The U. G. I. building until late Friday afternoon, August 16, when he left for the seashore to spend the week-end with his family.

Mr. Hutchings entered the employ of The U. G. I. Company in 1920, as assistant general manager. In August, 1921, he became general manager, and two years later was elected vice-president in charge of operations. In February, 1927, he became vice-president in charge of engineering development.

Fred W. Freese, well-known gas engineer, died recently at Chicago, Ill. Mr. Freese was 67 years old and had been connected with the gas industry for the best part of his life. He spent many years in LaPorte.

Affiliated Association Activities

Wisconsin Utilities Association

THE program of the Women's Conference of the Wisconsin Utilities Association, which will be held in Milwaukee on Sept. 19 and 20, promises to be both interesting and instructive. Ruth C. Tarum, chairman of the Women's Committee, announces the following utility women will take part in the program: Skulda Baner, of the Lake Superior District Power Co., will respond to the address of welcome. "The Value of Rural Electric Service to the Housewife," by Mrs. Vera B. Meacham, Wisconsin Power and Light Co., will be discussed by Mildred Manley of the Southern Wisconsin Electric Co., while Mrs. Vera Ellwood, of The Milwaukee Electric Railway & Light Co., with the help of other girls in her department, will enact a playlet showing the "Value to Customers of Tested and Selected Appliances." Betty Handel, of the Madison Gas and Electric Co., will contribute the utility women's paean of praise to Thomas A. Edison and the progress made through his inventions under the title of "Light's Golden Jubilee."

There will also be a series of four-minute talks each day by women of the industry of their respective jobs under the general subject of "The Opportunities in My Job for Serving the Public." Lillian Minch, of Madison, and Lynda Hollenbeck, of Appleton, will lead the discussion.

Among the men who will participate in the program are G. W. Van Derzee, President of the Association; E. J. Steinberg, chairman of the Employees' Education Section, who will speak on "Employee Education"; C. E. Kohlhepp, Wisconsin Public Service Corp., whose subject will be "Taxation"; and the "Romance of Power," illustrated, as depicted by A. A. Engelhard, of The Milwaukee Electric Railway & Light Co. Several other outside speakers are in prospect, announcements regarding whom will be made later.

An inspection trip through the public service building of The Milwaukee Electric Railway and Light Co., which will include the merchandising department, home service department, customer's hall, educational and medical departments, has also been scheduled.

Everyone is anticipating a live meeting, as well as a record-breaking attendance.

The Commercial Section convention of the Wisconsin Utilities Association will be held in Fond du Lac, on October 3 and 4. E. R. Felber, Madison Gas & Electric Co., is chairman of the Commercial Section and is busy planning the program.

Zella Patterson, chairman of the Home Service Committee, has planned a very instructive program. Miss Marie Sellers, director of the home economics department, Post Products Co., New York, will talk on "Selling Home Service to Your Community."

General committee reports will also be presented, but as yet no definite speakers or titles have been selected. Several other speakers are in prospect, and a definite announcement will be made later.

F. W. Lesley

G. L. Cullen

Pennsylvania Gas Association

WARREN A. NORRIS, President, Pennsylvania Gas Association, has announced the resignation of George L. Cullen as secretary of the Association and the election of Frank W. Lesley to the office.

Mr. Lesley has been comptroller of the Pennsylvania Gas and Electric Co., York, Pa., since December, 1928. Previously, for six years he was field auditor in the Consolidated Corporations Division, Income Tax Unit, Treasury Department. He is a graduate of the Wharton School of the University of Pennsylvania.

Mr. Cullen, who is sales manager of The Harrisburg Gas Co., served as secretary-treasurer of the Association for the past eight years. At the April meeting in Philadelphia he resigned as treasurer and was succeeded by W. G. Sterrett of the Philadelphia Suburban-Counties Gas and Electric Co.

As a token of appreciation of Mr. Cullen's long and capable service, Council of the Association voted him the Association's medal, which ordinarily is given only to past Presidents.

Empire State Gas and Electric Association

ALL arrangements have been made for the twenty-fifth annual convention of the Empire State Gas and Electric Association to be held at Saranac Inn, Upper Saranac, N. Y., Thursday and Friday, Sept. 19 and 20. The business sessions will be held in the morning of each day and include addresses by Albert Whit-

ney, President of National Bureau of Casualty and Surety Underwriters; Earl Whitehorne of McGraw-Hill Publishing Co.; William E. Mosher, dean of School of Citizenship and Public Affairs of Syracuse University; Matthew S. Sloan, President of National Electric Light Association; Francis Perkins, New York State Commissioner; Hon. Randall J. LeBoeuf, Jr., assistant attorney general in charge of water power matters; Hon. Seabury C. Mastick, Senator from Westchester County, and Col. Oscar H. Fogg, President of the American Gas Association.

The chairmen of the sections will submit reports on the work of the past year as will the chairmen of the general committees. A reception to the President is scheduled for the evening of the first day. Following the reception a playlet by J. H. Van Aernam will be presented with the remainder of the evening given over to dancing. The feature of the entertainment is a golf tournament arranged by a committee composed of H. C. Davidson, chairman, J. H. Haley, and G. H. Smith. The entertainment planned for the ladies by the Women's Section includes bridge parties, trips, a putting contest, etc., with suitable prizes.

New Jersey Gas Association

THE annual summer outing of the New Jersey Gas Association will be held on Saturday, September 14, at Centerton Lake Pavilion, near Bridgeton, New Jersey.

Centerton Lake, just eight miles from Bridgeton, is a secluded spot with a beautiful lake for boating, bathing and water sports. One of the most popular picnic grounds in the southern part of the state, it has been reserved for that day exclusively for Association members and their guests.

The grounds are easily accessible by automobile and all main roads will be prominently posted with arrows to direct the members to the scene of activities.

The entertainment features include a ball game, quoit contest, water sports, and original novelties. The committee announces that the atmosphere is to be that of an "old-fashioned picnic," and extensive preparations have been made to provide an enjoyable outing for all who can attend.

First Theatre to Use Gas Lights Destroyed by Fire

NEW YORKERS received a glimpse of the past recently when all the metropolitan dailies carried first page stories of the burning of the Thalia Theatre, known for many years as the Bowery Theatre.

This theatre, which enjoyed the distinction of being the first theatre in the world to use gas lighting, was built in 1826.

Karl Auer, Inventor of Gas Mantle, Dies

Dr. Auer

KARL BARON AUER VON WELSBACH, famous Austrian inventor of the incandescent gas mantle, died in his seventy-second year at his castle in Corinthia on August 4, 1929. He was a member of many learned societies and doctor honoris causa of Vienna University and several universities in Germany. He was best known for his invention of the incandescent gas burner. He also invented in 1898 the first metal filament electric lamp.

Dr. Auer was one of the foremost chemists in Europe, and was a wealthy landowner. He was born in Vienna in 1858, the son of Alois Auer, a royal chamberlain and director of the royal and state printing establishment. After his education in Vienna and at Heidelberg he devoted himself to the career of a chemist.

In 1885 he invented the incandescent mantle for gas lights, which made his fame and fortune, the device being used throughout Europe. In 1898 he devised the osmium glow-lamp. He was also the discoverer of the ferrocerium compound, known as Auer metal, which is generally used in the manufacture of cigarette lighters.

Dr. Auer was the author of numerous technical works, devoted chiefly to the study of the chemistry of rare earths.

U. S. Bureaus Say Gas Did Not Cause Refrigerator Deaths

THE Governmental agencies have given assurances of the general safety of present-day household refrigerating methods.

A joint statement by the Public Health Service, the Bureau of Standards and the Bureau of Mines said that its purpose was to "relieve any undue anxiety in the minds of those possessing household refrigerating systems."

"Newspaper headlines and statements to the effect," the report declared, "that the fatalities in Chicago were caused by 'gas refrigeration' without doubt had reference only to the fact that the refrigerants were gases. Illuminating or fuel gas, it added, was in no way involved.

Individual refrigerators do not use methyl chloride, the announcement continued, while a large majority of the "electric" refrigerators used sulphur dioxide. Gas-fired refrigerators employ ammonia.

Natural Gas Department

S. W. MEALS, Chairman H. C. MORRIS, Vice-Chairman
E. J. STEPHANY, Secretary

Support of Gas Law Is Asked by Standard Oil Co. of California

THE new California law prohibiting the unreasonable waste of natural gas in production of crude oil deserves the cooperation and support of the entire oil industry, says the Standard Oil Company of California in its August bulletin. It comments that nothing so comprehensive as that act, which will go into effect at the end of this month, has yet been attempted in the interest of conservation of oil resources.

"Detailed figures for June indicate the magnitude of the waste of natural gas," says the article. "Every day during that month 641,883,000 cubic feet of natural gas from California oil fields blew off into the air. This is equivalent to the heat, or energy, value of 121,100 barrels of fuel oil, or 34,600 tons of coal a day. For the whole month of June the loss of gas amounted to 19,256,500,000 cubic feet, equal to 3,633,300 barrels of fuel oil, or 1,038,000 tons of coal. Inasmuch as there is no market for this gas it is difficult to set down its worth in money, but applying a price of 7 cents a thousand cubic feet, for which great quantities of natural gas are sold in the field, a figure of $1,347,955 for the month is reached.

"From every point of view the conservation of natural gas and the elimination of waste are essential. There is an excess of gas now only because the oil industry is producing too much crude oil. If the gas is shut in, the overproduction of crude will be curtailed, bringing supply and demand more nearly into balance. Slower and more orderly development, enabling the gas to perform its most valuable functions of driving oil to the well and lifting it to the surface, will result in a greater ultimate recovery of oil. More orderly development will prevent periods of great overproduction, and eliminate the great expense of storing surplus petroleum. All this will work for a more prosperous industry. It will prolong California's supply of both oil and gas, and defer a possible day of importation of petroleum by California."

The article states that natural gas should be kept in the ground. "California's natural gas deposits constitute a great natural resource," the article continues. "Natural gas is a valuable fuel and its wastage in huge quantities is economically criminal. Southern California has long had the benefit of natural gas for industrial and domestic use. Its availability is one of the important factors in the rapid development of that region. Recent discoveries of gas in San Joaquin Valley will give central California and the great San Francisco Bay area a supply of this fuel. While there is much more gas available at the moment than California can use, there is no certainty as to how long the supply will last. Therefore gas now blowing off should be kept in the ground. In a sense gas is like water. Running to the sea, water is lost; impounded, it is made to serve a useful purpose. So also with natural gas.

"The development of natural gas fields and establishment of a reserve is wise. The demand for natural gas fluctuates violently. The market consumes far more gas in the winter than in the summer. One authority states that at times there is as much as a five to one variation between the average summer day and a winter day of peak demand. Hence, there should always be available sufficient gas to meet the maximum public requirements.

"Gas has another value than its use as fuel. It performs vital services in moving oil toward a well and lifting it to the surface. In times of shortage of crude oil its utilization for these purposes might be warranted,

even if it were necessary to let it go into the air."

Total production of natural gas in California in 1928 was 316,830,147,000 cubic feet, of which 77,590,724,000 was wasted, Claude C. Brown, State gas administrator, advised the Railroad Commission in his annual report for the fiscal year ended June 30.

The balance was accounted for roughly as follows: Domestic and commercial sales, 35,000,000,000 cubic feet; industrial sales, 42,000,000,000 cubic feet; distribution and transmission losses, 9,000,000,000 cubic feet, and field use, fuel shrinkage, etc., 154,000,000,000 cubic feet.

Lone Star Company Starts Beautification Program

A BEAUTIFICATION and clean-up campaign has been started by the Lone Star Gas Company for all its metering stations, compressor stations and buildings throughout Texas and Oklahoma. Through this means the company is attempting to do its part in aiding all towns and cities in its territory with their clean-up plans.

Grounds have been leveled and shrubbery planted around the metering stations and the compressor stations which are of an attractive design. Where fences around the buildings and bridges over streams are necessary, these will be built.

In one city served by the company, the citizens approved so heartily of the aluminum paint put on the gas company's property that all city property such as standpipes, trash cans, etc., were given a coating of the paint.

Plans for the beautification were suggested by J. A. Martin, superintendent of transportation and maintenance of the company, which has its headquarters in Dallas, Texas. Local managers throughout the territory are aiding in the work.

Natural Gas Article of Interest

IN the June, 1929, issue of the **Bureau of Standards Journal of Research** there appears an article entitled, "The Accurate Determination of the Gasoline Content of Natural Gas and the Analytical Separation of Natural Gases by Isothermal Fractional Distillation," By Martin Shepherd.

This paper describes a method for the accurate determination of gasoline in natural gas. The determination involves a special separation of the natural gas by fractional distillation at low temperatures and pressures. A recombination of the resultant fractions is made in such a way that it is possible to determine the maximum amount of hydrocarbon condensate present in the original gas which possesses any given vapor pressure at any given temperature. Special forms of apparatus are used for separating the higher boiling constituents and determining their liquid volume of 0.001 ml. Apparatus and procedures are described in detail, analytical results given, and a direct comparison made with existing field and laboratory methods. The analytical separation of natural gases and their commercial condensates is also discussed. The paper as a whole is intended to be a simple instruction book for those who wish to engage in such work.

Natural Gas Turned Into Mains at Independence, Mo.

CITY officials of Independence and Sugar Creek, Mo., on July 29 turned natural gas into the mains of the Jackson County Light, Heat and Power Co., at Independence. The turning of the large valve at the city gate near Sugar Creek, Mo., by Roger T. Sermon, mayor of Independence, and John W. Kelly, mayor of Sugar Creek, brought the first natural gas to the city of Independence, and surrounding territory served by this company.

Those in the photograph, left to right, are L. L. Garner, manager of the Jackson County Light, Heat and Power Co.; Claude P. Brown, president of the Kiwanis Club, Fairmount, Mo.; John W. Kelly, mayor of Sugar Creek, and Roger T. Sermon, mayor of Independence.

The gas company at Independence was purchased by the Gas Service Company, Doherty concern, which took steps to bring natural gas to Independence shortly after its purchase early in March.

Turning on the gas

Lone Star Gas Co. Now Has House Organ

THE first edition of a monthly publication called **The Blue Blaze**, issued by the Lone Star Gas Company and its affiliated companies, has just appeared. The magazine is published for employees of the Community Natural Gas Co., the Municipal Gas Co., the Dallas Gas Co., the Fort Worth Gas Co., the Meridian Gas Co., the County Gas Co., and the Lone Star Gas Co.

It contains considerable news of employee activities and also interesting articles on constructive work being undertaken by the various companies.

The front cover of the first issue is an artist's illustration of the discovery of fire with the title "The Birth of Fire." This is the first of a series of cover illustrations for the magazine which will trace the evolution of fire from prehistoric times down to the present day of natural gas. The first issue has 36 pages.

Visitors at A. G. A. Headquarters

DR. ROKURO MITSUGI, director and chief engineer of the Tokyo Gas Company, Ltd., Tokyo, Japan, and Shoichi Kohno, of Mitsui & Co., Ltd., were recent visitors at A. G. A. Headquarters. Dr. Mitsugi is the chairman of the Engineering Section of the Imperial Gas Association of Japan and is returning to his native country from an extended trip to the German Gas and Water Exhibition. He stated that the gas industry in Japan is increasingly progressive and the matter of rate structure is receiving attention with a view toward increasing the use of gas.

C. B. McKinney

Charles B. McKinney, general manager of Houston Pipe Line Co., Houston, Texas, and a leading figure in the gas industry, died on July 16, following an attack of heart trouble. He was also a director of the Houston Natural Gas Co., subsidiary of Houston Pipe Line Co., and had been identified with the gas industry in the South for more than a quarter of a century.

McKinney was born 44 years ago at Cotulla, Texas. In 1908 he joined the Galveston Gas Co., and four years later moved to Biloxi, Miss., in connection with gas work. Shortly thereafter he joined the North Texas Gas Co., Dennison, Texas, and in 1914 was made vice-president and general manager of that company. In 1916 he was elected President of the Dallas Municipal Gas Co., which he served until five years ago when he joined the Houston company.

Frank W. Kirk, general superintendent of Houston Pipe Line Co., has been named acting general manager.

Richmond News—Leader Refuses to Print Anonymous Attacks

THE Richmond, Va., **News Leader** announces that hereafter all communications making complaints or containing attacks against a firm or a corporation must appear over the signature of the writer. The editor announces plainly that this rule, which is an extension of a similar one referring to individuals who are attacked, is made in justice to public utilities, which seem to **The News Leader** to have a right to know the name of an assailant. There is no more reason why they should be cudgelled anonymously than there is why **The News Leader** should lend its columns to unsigned assaults on private persons.

"There is something phony anyway," concludes the newspaper, "about a complaint behind which the aggrieved person is unwilling to stand."

Dr. Little Addresses Society of Chemical Industry

DR. ARTHUR D. LITTLE, President of Arthur D. Little, Inc., Cambridge, Mass., chemists and engineers, delivered his presidential address before the Society of Chemical Industry (London) at Manchester, England, July 9. His subject was "Science and Labor." He called attention to the opportunities for employment created by scientific discovery, offsetting labor displacement by improved manufacturing practice, new industrial processes, and invention.

During his stay in England, Dr. Little will receive the honorary degree of Doctor of Science from the University of Manchester and Honorary Associateship in the Manchester College of Technology. He expects to return to the United States late in August.

Loans in St. Louis

ANY loans made by the M. A. Rust & Sons Realty Co., St. Louis, Mo., on home modernization work that will include gas heating plants, automatic water heaters, laundry dryers, gas refrigerators, or incinerators, will be included as part of the loans made, according to a recent letter received by John J. Burns, commercial manager of The Laclede Gas Light Co., from the Rust company.

Helium Now Produced on Large Scale at Amarillo

THE new Government helium plant at Soncy, near Amarillo, Texas, produced during July 648,850 cubic feet of helium of an average purity of approximately 97 per cent, the United States Bureau of Mines has announced. The first shipment of helium from the plant was made on May 6 and production has been steadily increasing since that date.

While detailed cost data are not yet available, it is confidently believed that production costs at the new plant will be well within the previously estimated figure of $20 per thousand cubic feet of helium. This is the lowest figure at which helium has ever been produced, so far as is known to the Bureau of Mines. Only a single unit of the plant is now in operation. When the second unit is completed, in the near future, the normal capacity of the plant will be far in excess of present Government requirements. With practically the same fixed charges, production can then be increased to any desired amount up to 20,000,000 cubic feet, or more, per year, and cost per thousand cubic feet of helium will depend on the amount of orders received.

The average cost of helium produced at the Fort Worth plant during 1926 was about $34 per thousand. Compared with this figure, a cost of $20 per thousand effects a saving of approximately $36,000 in the helium required for a single filling of the Los Angeles, or $91,000 in the cost of the 6,500,000 cubic feet required to fill one of the big ships now under construction for the Navy.

Shipments of helium are now being regularly made from the Amarillo plant in specially designed tank cars to the Navy at Lakehurst, N. J., and to the Army at Scott Field, near St. Louis, Mo., and at Langley Field, near Newport News, Va., for use in the dirigibles operated by these services.

Before the World War, helium, which had been obtained only in small amounts as a curiosity in scientific laboratories, cost about $2000 per cubic foot.

Helium is extracted at the new plant from natural gas having an average helium content of approximately 1¾ per cent produced from the Cliffside Structure lying northwest of Amarillo. Gas from 26,000 acres of land is available to the plant.

Capt. John Tonkin

CAPTAIN JOHN TONKIN, aged 92, died at his home in Oil City, Pa., on July 17, after an illness of six weeks. Capt. Tonkin was the father of John B. Tonkin, of Pittsburgh, Pa., a well-known figure in the Natural Gas Department of the American Gas Association.

Capt. Tonkin himself was a leading figure in the natural gas industry, having been a resident of northwestern Pennsylvania since 1866, when he launched his career in the oil and gas fields. He was superintendent of the Dennis Run and New York Oil Co. In 1887 he went to Ohio as manager of the Northwestern Ohio Natural Gas Co. and was in that state six years, five of which were spent in Toledo.

In 1894, Captain Tonkin moved to Oil City and accepted the position of assistant general manager of the natural gas interests of the Standard Oil Co. He remained in that position until the death of E. Strong, when he was made president and general manager of the Ohio City Fuel Supply Co. and of the Mountain State Gas Co. of West Virginia as well as the River Gas Co. of Ohio, vice-president of the United Gas Co. and vice-president and general manager of the Clarksburg Light & Heat Co. of West Virginia, on the dissolution of the Standard Oil Co. retiring from all of the positions except his association with the Clarksburg Light & Heat, which he resigned in 1915.

Meanwhile Captain Tonkin had also acquired large interests of his own in the Kentucky fields, being president of the Central Kentucky Natural Gas Co.

Here's a Testimonial Advertisement That Is True

CAPTAIN C. F. ADAMS, owner of the famous O'Diva vaudeville act, has never taken a blind-fold test, but he is an enthusiast when it comes to gas water heaters.

The illustration here shows Capt. Adams purchasing a new water heater to replace one which has been in operation for several years and which accompanied his act around the world. The new heater is to go to Australia first, on the first leg of another round-the-world excursion.

The heater is used to temper the cold water in the tank used in the act, so that the diver will not be chilled.

The traveling water heater—and how!

Accounting Section
F. H. PATTERSON, Chairman H. W. HARTMAN, Secretary J. L. CONOVER, Vice-Chairman

The Public Utility Industry as a Career

By GEORGE B. CORTELYOU

THE utility business—by which I mean the gas and electric industries engaged in furnishing light, heat and power to the public—has its difficulties and drawbacks, which are peculiar to it, and it also has its compensations. In this respect it is like any other business. On the whole, I think that to the young man about to enter upon a business career it offers as many opportunities for substantial rewards and personal satisfactions as any other business. Not every one will succeed in it, of course; its prizes are not to be lightly won. Any one looking for quick and rich returns with a minimum expenditure of effort had better look elsewhere; he will not find them here. Neither is he likely to find them anywhere else.

As the reader knows, the utilities are quasi-public corporations. Their rates and service are controlled by commissions created by the several States for this purpose. Their earnings may not exceed a fair return on the value of their property devoted to the public use. Excessive profits are thus ruled out from the start. Their accounting systems are prescribed by the regulating commission. Their stock and bond issues also are subject to the same authority. Voluminous reports are required to be made to the commission from time to time setting forth their operations in great detail. Representatives of the commission may appear at their offices at any time to check up on expenditures or other items on which special information is desired.

This is the price that the utility pays, and rightly pays, for the privileges it receives from the public. It is granted an exclusive franchise to serve a given territory. If a gas company, it has no competition with other gas companies; if an electric company, no competition with other electric companies. Of course, it does have competition, and very real competition too, with the producers of other fuels, such as coal and oil, especially in the industrial field. Also, it must meet inter-industry competition, which is assuming large proportions. In the strenuous bidding for the consumer's dollar, the gas range has to compete in the family budget with the radio set, the phonograph, the automobile, and so on. Thus, the utility, in a very real sense, lives in an atmosphere of competition.

With its rates prescribed by law or regulation, the utility finds itself in grave difficulty in periods of rising prices—such as happened during the war—because prices rise faster than it is possible to secure rate adjustments to equalize them, and in the meantime serious losses pile up, which cannot be recouped. A glance at the market quotations of utility securities during the war period will give some idea of the extent to which the business was depressed. Many companies were adversely affected, and many executives passed sleepless nights. Happily, the situation was gradually righted, and now rates generally are on a more equitable basis, permitting the companies to render the service that the public expects and demands.

Let us consider now some of the more favorable aspects of the utility business, from the point of view of one choosing his life work.

It is a permanent business. While it is true that nothing man-made is really permanent, especially in these days of rapid change, yet so far as we can foresee the utilities are here to stay. Gas and electricity are necessities of modern life and, in the absence of revolutionary developments, will remain so indefinitely. The newcomer, therefore, may feel that in entering this business he is ally-

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Mr. Cortelyou is President of the Consolidated Gas Company of New York, New York, N. Y.

Reprinted from "The Wharton News of Finance and Commerce," official organ of The Wharton Associates.

ing himself with an industry that will outlive him. He has every reasonable assurance that he will not wake up some morning to find that his business has died during the night.

It is a growing business. Both gas and electric service have shown a continuous growth over a long period of years. Taking the two industries together, the capital invested in them today is probably not far from $13,000,000,000, and if we include the natural gas industry, $1,750,000,000 more; tremendous figures evidencing tremendous growth. The electric light and power industry has reached the point where it will require at least $800,000,000 this year for extensions and improvements; and the gas industry (manufactured and natural) will require more than half that sum. All this means that the public is demanding more and more gas and electric service, which the companies must be in readiness to supply.

It is a stable business. It is not subject to sudden and violent fluctuations. It is not up one year and down the next. Drawing its revenues from the entire population and from all classes of business, it is not affected much by depressions in individual industries. In no single year in the past decade have its revenues failed to show an increase over the preceding year. As long as the country as a whole remains prosperous, it is reasonable to assume that the utilities will share in that prosperity, to which, of course, they contribute materially.

It is a many-sided business. It enlists the services of the financier, the executive, the lawyer, the engineer, the accountant, the salesman, the advertising expert, and so forth. The utilities retain control of their product throughout the cycle from the coal pile to the consumer's appliance, and many branches of engineering and chemical science are involved in the various stages of the process. The technical departments are: construction, manufacture, distribution and utilization, which are subdivided into special sections. Then there are the commercial, accounting, legal, statistical, personnel and other departments. Questions relating to finances, rates, public relations, taxation, advertising and the like, are ever-present with the large utility. All in all, few businesses have so many and varied facets.

It is a business of service. Of course, service is an important part of any business, but peculiarly so in the case of the utilities. Their customers are the entire public. Their product goes into the homes of the people and their places of business. Their contact with them is intimate and constant. In their best estate, they are upbuilders of the community, servants of the common good. Their field is large and their appeal is strong to those who are qualified by character and education to meet their ever-growing responsibilities. Character first, education next. These are fundamental to the success of any enterprise.

H. F. Weeks Made Secretary of P. & A. Section

HOWARD F. WEEKS has been appointed Secretary of the Publicity and Advertising Section of the American Gas Association, effective August 15, 1929, according to an announcement by Alexander Forward, managing director of the Association.

Mr. Weeks was formerly assistant secretary of the Section and since the resignation of Chas. W. Person, last spring, has been acting secretary, as well as editor of the AMERICAN GAS ASSOCIATION MONTHLY since January, 1926.

Commenting upon his selection for this position Mr. Forward says: "Mr. Weeks has been a most tireless and intelligent worker in all matters pertaining to the publicity and advertising activities of the Association and the industry and the unanimous approval of this appointment by officers of the Section, as well as all those cognizant of his work, is a testimonial to the satisfactory and efficient service he is rendering."

Mr. Weeks is also treasurer of the Public Utilities Advertising Association, of which he has been a most active member for more than three years.

As previously announced Keith Clevenger is director of publicity and advertising for the Association.

An error appeared in the last issue of the MONTHLY, with reference to the address of J. R. Munce, nominated for an unexpired term on the managing committee of Natural Gas Department. Mr. Munce is now living in Shreveport, La., instead of Pittsburgh.

Publicity and Advertising Section
E. FRANK GARDINER, Chairman JAMES M. BENNETT, Vice-Chairman
HOWARD F. WEEKS, Secretary

Why Progressive Public Relations?

BY JULIAN GARRETT

YEARS ago very little was written upon the subject of public relations policies of utility companies, and less was done by such companies towards the adoption and carrying out of policies calculated to develop a favorable attitude on the part of their customers.

Times have changed. Now we rarely pick up a utility magazine without finding some space at least devoted to some phase of this particular subject. The public utility company in this day and generation realizes how all-important it is for its own success to mould and shape opinion favorable to itself on the part of its customers and the public generally. It, therefore, adopts progressive public relations policies.

These policies are all based upon the application to business relations of the doctrine of "The Golden Rule." The great mass of the public is fair minded, and will react fairly to fair dealing. Now, what do we mean by fair dealing?

A public utility should render adequate, safe, and courteous service at just, reasonable, and fair prices to all without discrimination. If its record of service shows that it has been diligent in the public interest in effecting economies, in making necessary additions and betterments, in sharing with its customers the benefits of improved efficiencies, then it is dealing fairly, and adverse criticism will come only from those who are themselves unfair. This criticism will do little harm.

Almost all the articles which have been written upon this subject deal only with the adoption of sound public relations policies and their application without discussing the primary motives underlying such policies. There is an ethical motive with which every loyal, right-thinking employee will be in accord. I only allude to this in passing purposing to confine my remarks in this brief article to the hard-boiled-dollars-and-cents motive.

In the first place how may revenue be increased? There are many ways, but in the limited space allotted to this article I can only deal with the more important ones, as follows:

1. Every satisfied customer is a potential advertising agent of the service rendered, and as such his influence will tend to bring the utility new customers.

2. Every satisfied customer, who is availing himself of only a limited application of the use of the utility's commodity, will more readily install additional appliances for more widespread use of such commodity.

3. A dissatisfied customer may discontinue the use of the utility's commodity, resulting in loss of revenue. Preventing loss of revenue is just as important as increasing revenue.

In the second place how may operating expenses be reduced? The following ways are important:

1. A satisfied customer has little or nothing to complain about in respect to the efficiency of his appliances, and therefore the cost of free service is reduced to a minimum.

2. A satisfied customer does not complain as to the size of his bill, therefore loss of time through discussion of high bill complaints is avoided. Time saved means additional operating efficiency, and in the long run delays the employment of additional staff to cope with the utility's increasing business.

3. Satisfied customers beget more customers. Operating expense per customer decreases as the number of customers increases.

Mr. Garrett is manager and secretary-treasurer of Northwestern Utilities, Ltd., Edmonton, Alberta, Canada.

Brooklyn Employee Retires After 55 Years of Service

P. J. McIntyre

PATRICK J. McINTYRE retired from active work with The Brooklyn Union Gas Co., Brooklyn, N. Y., on Sept. 1, after 55 years of continuous service, which he began at the age of 19 years. He will receive the diamond set medal of the company for 55 years service on October 1.

Mr. McIntyre was born in Ireland in 1855. He attended school there until 15 years of age when he came with his parents to America. In 1874 he joined the staff of The Brooklyn Gas Light Co., which was merged with his present employer, The Brooklyn Union Gas Co., in 1895.

His first position in the company was in the coal gas plant at the foot of Hudson Avenue, where he measured coke. He soon became a general utility man, doing whatever was required, which sometimes included painting holders. From general utility man, Mr. McIntyre advanced to fitter's helper and worked in what was then called the meter shop. In time he became a fitter or meter setter. Being especially trustworthy and careful, he was given the job of night man, and in this capacity he had to watch the building, go out on night complaints, and fires. This kept him quite busy, especially when there was a fire, as he had to walk, because too much time would be lost in securing a horse from the stables—automobiles did not exist.

The fitters of that day were concerned altogether with open flame gas lights, and they always carried a number of gas light tips in their pockets. Gas companies gave their customers gas light equipment such as Bray tips, lava tips, and gas jet pillars—such materials as modern fitters only know by tradition.

Mr. McIntyre collected from prepayment or "quarter" meters, and in doing his duty in protecting his company, he often had arguments with the cash customers who used these meters, he seldom found one that did not contain foreign coin, slugs, and other substitutes for money. Chinese coins were at one time favorite inserts and the most difficult thing he had to do was to get real United States money from these customers in place of the worthless money. In Mr. McIntyre's recollections, prepayment meters contained about 50 per cent American money while the other 50 per cent was a little of everything but money.

Mr. McIntyre has nine children, five boys and four girls. Two of the boys, Frank and Henry, are now employed by The Brooklyn Union Gas Co.

In recent years Mr. McIntyre has been given a desk in the Brooklyn Branch where he has busied himself with matters pertaining to collections. After his 55 years of faithful service, he is entitled to his well earned rest, which his many friends hope he will enjoy.

Gas Fuel Used for Real New England Clam Bake

TO Fall River, Mass., probably goes the credit for the first use of gas fuel in a New England clam bake. It happened this way.

About sixty members of the distribution department of the Fall River Gas Works Co., recently planned a clam bake to be prepared on the company property. Due to the proximity of adjacent buildings, and the fire hazard and smoke nuisance incidental to the use of a wood fire for heating the stones, the management suggested that gas be used as the fuel for the bake. It was pointed out that not only would the objections be overcome, but that a better bake should result from the use of this superior fuel.

A suitable burner was designed and made by members of the distribution department and the bake was held as planned. The results were even better than expected. The stones were thoroughly and evenly heated, the ingredients of the bake were deliciously cooked, the time required for preparing the bake was considerably reduced, and the gas consumed was very low, only about 700 cubic feet.

Further advantages of the use of gas for this purpose were found to be the entire absence of smoke odor in the food, something very difficult to avoid when wood is used for heating the stones, and a much greater cleanliness in the cooking of the food due to the elimination of soot and ashes.

There are not many opportunities for securing additional load through the use of such equipment, perhaps, but the incident serves as another example for the superiority of gas for practically every process that requires heat.

Two Thousand Rates Given in Rate List

MORE than 2018 gas rates are given in Rate List No. 7, the official rate publication of the American Gas Association. This list, which is available to memebrs of the American Gas Association at $1.50 a copy, is enjoying a very wide distribution in the industry.

Manufacturers Section

H. LEIGH WHITELAW, Chairman F. G. CURFMAN, Vice-Chairman
C. W. BERGHORN, Secretary

Many Manufacturers Plan Exhibits

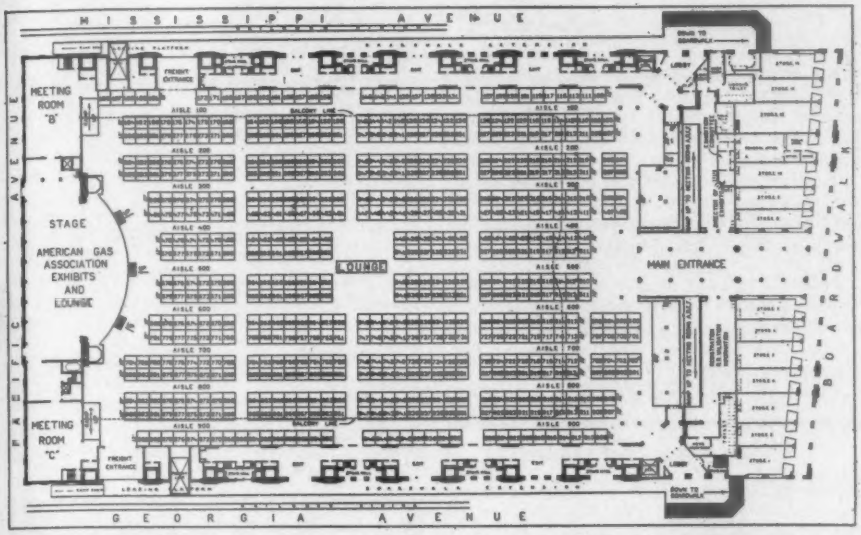
THE list of exhibitors at the eleventh annual American Gas Association convention to be held at Atlantic City, N. J., October 14-18, is a long and imposing one.

As explained elsewhere in this issue of the MONTHLY, convention meetings have been so arranged as to allow every delegate to visit the exhibit and have ample time to devote to it.

As of Aug. 30, the list of exhibitors and the booth numbers allotted to them are as follows:

Abendroth Bros. 314, 316
A-B Stove Co. 424, 426; 525, 527
Adams Bros. Mfg. Co., Inc. 154, 156
Air Reduction Sales Co. 760, 762
Alpha-Lux Co., Inc. 524
American Cast Iron Pipe Co. 764, 865
American Foundry & Furnace Co. 117
American Gas Furnace Co. 153, 155
American Gas Journal 631
American Gas Products Corp. 452, 553
American Heater Corp. 311, 313
American Meter Co. 672-676; 773-777
American Radiator Co. 754-758
American Stove Co. 256, 258; 357, 359
Armstrong Cork & Insulation Co. 417, 419
Autogas Corp. 334, 336
Automatic Gas-Steam Radiator Co. 337
Apex Electrical Mfg. Co. 163, 165
Atlantic Tubing 214
Bailey Meter Co. 724
Barber-Greene Co. 564
Barstow Stove Co. 134
Bartlett & Snow Co., The C. O. 655,657
Bartlett Hayward Co., The 740-746
Beckwith Co., The 206, 307
Bernitz Furnace Appliance Co. 626
Bettinger Enamel Corp. 119
Bingham & Taylor Co. 716
B-Line Boiler Co. 475, 477
Blodgett Co., The G. S. 310
Boone County Coal Corp. 850
Bristol Co., The 851, 853
Bryan Steam Corp. 340, 342
Bryant Heater & Mfg. Co., The 561-565
Burgess Parr Co. 721
Burroughs Adding Machine Co. 600-606; 701-707
Byers Co., A. M. 883, 885
Caloric Gas Stove Works 224, 226
Carrier-Lyle Corp. 168, 269, 271
Celotex Co. 124
Central Alloy Steel Co. 220
Chambers Mfg. Co. 217, 219, 221
Chaplin-Fulton Mfg. Co., The 556, 558
Chicago Bridge & Iron Works 755
Clark & Co., Div., Geo. M. 264, 365
Cleanliness Institute 171, 173
Cleveland Gas Burner & Appliance Co. 344, 346
Cleveland Gas Meter Co., The 637
Cleveland Heater Co., The 435, 437
Cleveland Trencher Co., The 869, 871, 873
Clow & Sons, James B. 319, 321
Collier Gas Heating Co. 140, 142
Columbia Burner Co., The 358, 360
Columbus Heating & Ventilating Co., The 150
Connelly Iron Sponge & Governor Co. 624
Connersville Blower Co. 576, 578
Consumers Construction Co. 636
Counterflo Heater Co. 138
Crane Co. 824, 826; 925, 927
Cribben & Sexton Co. 468, 470; 569, 571
Crown Stove Works 421
Crucible Steel Co. of America 106, 108
Cruse-Kemper Co. 673
Cutler-Hammer, Inc. 843-847
Dahlquist Sales Corp. 211
Dangler Stove Co., Div. 353, 355
Dearborn Chemical Co. 726, 827
Detroit-Michigan Stove Co., Garland Div. 268, 270; 369, 371
Detroit-Michigan Stove Co., Jewel Div. 423-427
Detroit Vapor Stove Co. 216, 218
Direct Action Stove Co., Div. 361, 363
Dresser Mfg. Co., S. R. 514-518
Dri-Steam Valve Sales Co. 852
Dun-Rite Clock Device Co. 443
Duotor Manufacturing Co. 312
Economy Governor Co. 732
Electric Indicator Corp. 510, 512
Electrical Research Products, Inc. 3
Electrolux Servel Corp. 178-184; 279-285
Ensign-Reynolds, Inc. 479, 481
Eriez Stove & Mfg. Co. 420, 422
Estate Stove Co. 304, 405, 407
Favorite Stove & Range Co., The 207, 209
Felt & Tarrant Mfg. Co. 806
Fisher Governor Co., The 634
Floyd-Wells Co., The 318, 320
Foxboro Co., Inc., The 677, 679
Fuller & Warren Co. 322-326
Garlock Packing Co. 717
Gas Heat Corporation 125, 127
Gas Machinery Co., The 568, 570
Gas Purifying Materials Co. 966

General Ceramics Co. 167, 169
General Coal Co. 719
General Gas Light Co. 251-265
General Office Equipment Corp. ... 612, 713, 715
Giant Manufacturing Co. 617
Glenwood Range Co. 238-246
Griffin & Co., John J. 680
Groble Gas Regulator Co. 846
Guardian Gas Appliance Co. 137, 139
Harper-Wyman Manufacturing Co. 132
Hays Manufacturing Co. 656
Heating and Ventilating 123
Helme & McIlhenny 668
Hoffman Heater Co., The 323-327
Home Incinerator Co. 416, 418
Homestead Heater Co. 181-189
Hones, Inc., Charles A. 136
Hotstream Heater Co., The 230, 232
Humphrey Co. Div. 430-436
Hurley Machine Co. 234
Hush-A-Phone Corp. .....
Improved Equipment-Russell Engrg. Corp. .. 868
Independent Stove Co., The 415
Intercolonial Gas Journal 718
International Business Machines Corp. 704, 706; 805, 807
Dayton Scale Co. Div.
International Time Recording Co. Div.
Tabulating Machine Co. Div.
International Combustion Engrg. Corp. 572, 574
Combustion Engineering Corp.
Dry Quenching Equipment Corp.
International Coal Carbonization Co.
Lewis Mfg. Co., F. J.
Ironton Stove & Mfg. Co. 332
Isbell-Porter Co. 669, 671
Johns-Manville, Inc. 650-654
Johnson Gas Appliance Co. 145
Judelson Dryer Corp. 227
Kernit Incinerator Co. 431
Kieley & Mueller, Inc. 833
Kitson Co. 222
Kompak Co., The 445, 447
Koppers Co., The 660, 662
Lacey Corp., W. R. 215
Lambert Meter Co., Inc. 675
Lamneck Co., The W. E. 330
Lattimer Stevens Co., The 644, 646
Lattner Mfg. Co., P. M. 245, 247
Lavino & Co., E. J. 642, 743
Linde Air Products Co., The 633, 635
Lindemann & Hoverson Co., A. J. 144, 146
Lovekin Water Heater Co., The 557, 559
Majestic Mfg. Co. 157, 159
Maryland Meter Works 769
McDonald & Co., D. 678, 779
McDonnell & Miller 863
McEverlast, Inc. 864, 965
McLean Economy Gas Furnace Co. 152
McWane Cast Iron Pipe Co. 625, 627
Mears-Kane-Ofeldt, Inc. 368, 370
Merco Nordstrom Valve Co., Inc. 659-665
Mettler & Co., Lee B. 109, 111
Metric Metal Works 670, 771
Milwaukee Gas Specialty Co. 519, 521
Mine Safety Appliances Co. 638, 640
Minneapolis-Honeywell Regulator Co. .. 343-347
Mohawk Asphalt Heater Co. 736, 738
Monarch Products Co., Inc. 116
Moore Brothers Co. 411, 413
Mueller Co. 611-615
Mueller Furnace Co., L. J. 410, 412
Mulcare Engineering Co. 734
Muvafast Co. Inc. 1
National Cast Iron Pipe Co. 319, 321
National Lead Co. 741
National Tube Co. 530-540
Natural Gas Magazine 757
New Process Stove Co., Div. 260, 262
Ohio Foundry & Mfg. Co., The 338
Parsons Co., The 765
Partlow Corp., The 378, 380
Patrol Valve Co. 433
Peerless Heater Co. 463, 465
Peerless Mfg. Co., The 233, 235
Peninsular Stove Co., The 414
Pennsylvania Furnace & Iron Co. 333, 335
Perco-Steril Machine Corp 280
Permutit Company, The 727
Philfuels Co. 830, 832; 931, 933
Pitman Mfg. Co., A. E. 121
Pitman Co., J. C. & J. F. 161
Pittsburgh Coal Co. 842, 844
Pittsburgh Equitable Meter Co. 614-618
Pittsburg Water Heater Co. 272-278; 373-379
Pittsburgh Valve, Foundry & Construction Co. 778
Plibrico Jointless Firebrick Co. 831
Porcelain Enamel & Mfg. Co. 210
Public Service Electric & Gas Co. 4
Public Utilties Retorts 772
Quakertown Stove Works 243
Quick Meal Stove Co., Div. 252, 254
Ray-Glo Corporation, The 460-464
Raymond Co., F. I. 141
Regent Stove Co. 306
Reliable Stove Co., Div. 250, 351
Remington Rand, Inc. 700, 702; 801, 803
Reynolds Gas Regulator Co. 745, 747
Richmond Radiator Co. 143
Robbins Publishing Co. 620, 622
Roberts & Mander Stove Co. 511-517
Roberts Brass Mfg. Co., The 439, 441
Roberts-Gordon Appliance Corp. 130, 231
Robertshaw Thermostat Co. 454-458
Robins Conveying Belt Co. 751, 753
Roesch Enamel Range Co. 305
Roots Co., The P. H. & F. M. 658, 759
Roper Corp., Geo. D. 472-478; 573-579
Ruud Manufacturing Co. 531-541
Safety Gas Main Stopper Co. 730
Sands Manufacturing Co., The 174, 176; 275, 277
Savory, Inc. 162, 164
Selas Co. 160



Layout of booths for A. G. A. exhibition in Convention Hall, Atlantic City, N. J.

Semet-Solvay Co..... 723, 725
Sexton Stove Manufacturing Corp.... 223, 225
Sherwin Williams Co., The..... 560
Slattery & Bro., Inc., J. B..... 317
Smith Mfg. Co., The A. P..... 720
Sparklets, Inc..... 113, 115
Spencer Thermostat Co..... 555
Sprague Meter Co., The..... 526
Stacey Bros. Gas Construction Co., The 639, 641
Stacey Manufacturing Co., The..... 621, 623
Standard Gas Equipment Corp. 350-356; 451-457
Acorn Div.
Oriole Div.
Triplex Div.
Vulcan Div.
Staynew Filter Corp.....774, 776
Stat-Amatic Instrument & Appliance Co... 562
Steinhorst & Sons., Inc., Emil..... 236
Superior Meter Co..... 653
Superior Screw & Bolt Co..... 126
Surface Combustion Co., The..... 372-376
Sweet & Doyle Foundry & Machine Co. 131-135
Tappan Stove Co., The..... 282, 284; 381-385
Tennessee Stove Works.....213
Thatcher Co., The..... 331
Time-O-Stat Controls Co..... 469-473
Tinnerman Stove & Range Co..... 459, 461
Titeflex Metal Hose Co..... 315
Traza Corp..... 722
Tufts Meter Works, Nathaniel..... 781
United Engineers & Constructors, Inc. (U. G. I.)..... 731-739
United States Pipe & Foundry Co..... 552, 554
Universal Sand Equipment Co..... 768, 770
U. S. Bureau of Mines..... 839, 841
U. S. Bureau of Standards..... 835, 837
Utilities Publication Co..... 619
Victaulic Company of America 630, 632
Wailes Dove-Hermiston Corp..... 780-784
Walker & Pratt Mfg. Co..... 170, 172, 273
Watts Regulator Co..... 158
Welsbach Co..... 438, 440
Western Gas Construction Co., The..... 664
West Gas Improvement Co. of America 750, 752
Wilcolator Company, The..... 362, 364
Wood & Co., R. D..... 520, 522
Wood Mfg. Co., John..... 237, 239, 241
Youngstown Pressed Steel Co., The..... 523

ECONOMICS OF TRAINING

THE necessity of training in industry from an economic point of view is pointed out very forcefully in a recent statement made by President Hoover, as follows:.

"A community must pay either for the cost of training labor or for the much greater cost of inefficiency of labor, and inefficiency of labor means inevitable general industrial and commercial inefficiency.

"No American employer can hold his markets and continue to employ labor if his labor is relatively unskilled or if his cost for training labor greatly exceeds that of his competitors."

Opportunity for Manufacturers

ALL manufacturer company members of the American Gas Association are again reminded of the provision made by A. G. A. headquarters whereby they may send their own catalog sheets to purchasers of the Industrial Gas Series Booklets.

To date this Industrial Gas Series consists of the following volumes: Combustion, House Heating, Bakeries-Hotels-Restaurants, Food Products, and Steam Boilers. These publications have all enjoyed large sales.

Provision is made in each book for the filing of manufacturer's catalog sheets. Manufacturers of equipment for use in any of the fields covered by the books will be furnished with lists of purchasers upon request to the Secretary of the Industrial Gas Section, American Gas Association.

IN MEMORIAM

John B. Luse, treasurer of Colorado Interstate Gas Co., and Interstate Natural Gas Co., and Mississippi River Fuel Corp.

Edwin C. Falvey, sales manager, Sprague Meter Co., Pittsburgh, Pa.

John L. Fulling, travelling auditor, C. H. Geist Co., Philadelphia, Pa.

Harry A. Gump, President, Weldaline Co., and vice-president and secretary-treasurer, Oklahoma Contracting Co., Dallas, Texas.

D. A. Reed, manager, City of Duluth Water and Light Dept., Duluth, Minn.

W. C. Cochrane, secretary, Detroit Brass and Malleable Works, Detroit, Mich.

David M. Evans, The Brooklyn Union Gas Co., Brooklyn, N. Y.

J. Louis Ruhl, vice-president, Coal Conversion Corp., New York, N. Y.

William L. Mills, Osawatomie, Kansas.

William E. Helme, vice-president and treasurer of the American Meter Co., died at St. Davids, Pa., on June 30, after an illness of several months.

C. L. Carr, superintendent of the Capital Gas and Electric Co., Topeka, Kansas, has been transferred to the St. Joseph Gas Co., St. Joseph, Mo., as superintendent.

H. H. Harrington, superintendent of the St. Joseph Gas Co., St. Joseph, Mo., has been transferred to Monett, Mo., in charge of building a gas distribution system there.

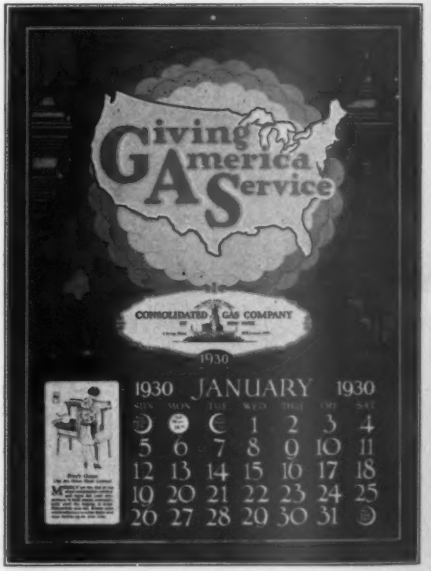
All-Gas Calendar Published

WHAT has been called the first all-gas calendar in the history of the industry, is being published by the American Gas Journal, New York, for the year 1930.

The calendar measures 11½" x 15", and is lithographed in nine vivid colors. The outstanding feature is the slogan, "Giving America Service," contained in an outline map of the United States, the initial letters of the words reading "GAS"—and conveying the thought that Gas is "Giving America Service."

A date leaf for each of the twelve months contains a picture of some gas appliance with appropriate wording underneath. Each appliance is arranged seasonally.

The **American Gas Journal** is publishing this calendar to further the interests of the gas industry. They are sold in lots from 500 to 50,000 or more. The name of the company is imprinted in the space above the monthly leaves as indicated in cut.



The all-gas calendar, and, above, a typical sheet

Industrial Gas Section

J. P. LEINROTH, Chairman — C. W. BERGHORN, Secretary — C. C. KRAUSSE, Vice-Chairman

A. G. A. Plans Exhibit at National Metal Show

THE Industrial Gas Section of the American Gas Association is again sponsoring a cooperative exhibit of furnace and accessory manufacturers at the National Metal Exposition which is being held at the Public Auditorium, Cleveland, Ohio, September 9 to 13.

The exhibit will show the latest developments in industrial furnace design and operation. All phases of metal treating will be covered by the manufacturers' displays, including various types of metal melting appliances, hardening, tempering, normalizing, carbonizing, and annealing, and finishing ovens for japanning, lacquering, etc. Temperature control equipment will also be on display.

As in past years at these shows of the Steel Treaters, there will be a control laboratory, in charge of W. E. Jominy, A. G. A. research associate at the University of Michigan. This control laboratory in the past has been a source of keen interest, as it has been possible to show the value of gas for heat treating various articles.

It is hoped that the industrial gas men from the various gas companies may find their way to Cleveland to view the latest developments not only in gas furnaces but in furnaces using competitive fuels, and learn further of the new alloys which are constantly being used in modern machine manufacture.

A splendid program of papers has been prepared, and a paper based on some of the research work which has been carried out by the Industrial Gas Research Committee will be delivered at one of the sessions by Mr. Jominy.

The American Gas Association has a limited number of tickets for the national metal exposition. These may be obtained from A. G. A. Headquarters.

The Industrial Gas Section of the American Gas Association handles the exhibition at the National Metal Show through the Committee on Contact with National Industrial Organizations, of which the following are members:

A. M. Apmann, chairman, Consolidated Gas Company of New York, New York, N. Y.

Karl Emmerling, vice-chairman, The East Ohio Gas Co., Cleveland, Ohio.

E. B. Dunkak, C. M. Kemp Co., Baltimore, Md.

H. F. Rehfeldt, The Peoples Gas Light and Coke Co., Chicago, Ill.

C. W. Berghorn, secretary, American Gas Association, New York, N. Y.

The New Competition

THE following paragraphs, of more than casual interest to modern executives, are excerpts from "The New Way to Net Profits," a book dealing with various phases of industrial management, written by Fred W. Shibley, vice-president of the Bankers' Trust Co.:

"The experienced business man will inevitably realize that national prosperity exists only in the degree that individual units of industry are successful, and that consumer capacity to purchase is measured by the prosperity of the human beings who constitute the national population; not the prosperity of the few but of the many.

"As a practical man, he arrives at the conclusion that his success is dependent in degree upon the success not only of those units directly and indirectly connected with his business, but also upon that of the farmer, the miner, the lumberman, the cotton grower, and all classes of manufacturers, merchants, professional men, and wage earners.

"He becomes convinced that in order to attain an honorable success he must cooperate with his fellow workers to the end that there shall be a coordination of thought and effort in the business of the nation, such as he hopes to effect in his individual enterprise, and that he will be most successful when the greatest number of his fellow men are successful."

New Metallurgical Laboratory

(Continued from page 536)

which justified the acquisition of additional laboratory facilities and this condition resulted in the establishment of the Metallurgical and Research Laboratory which is described and pictured here.

The purpose of the laboratory makes it immediately obvious that the selection of problems to be studied is a thing of paramount importance. For this reason the laboratory will not engage in commercial work and will not undertake routine investigations which could for various reasons be conducted to good advantage in commercial laboratories. As no consideration of profit or possibility of outside control is involved, the director will be free to undertake or decline any problem which is presented to him. His decision will be based upon a study of the facts to determine whether or not a solution of the particular problem presented will ultimately be of benefit to the customers of The Peoples Gas Light and Coke Company or the community which it serves. Any incidental service which may be extended to an individual customer will, of course, be freely given providing that it tends to enhance existing knowledge but does not withdraw effort from the problems of general interest which are at the moment under investigation.

It is desired, according to the company, that representatives of customers, prospective customers, allied industries, and institutions feel entirely free to confer with the laboratory staff in regard to any problems that may occur to them. A decision with respect to undertaking work, or the extent of a particular investigation, must of necessity depend entirely upon the factors involved.

By dedicating itself to the solution of industry's more advanced heat problems, attacked without fear or favor from industry's own viewpoint, and with equipment and personnel the equal of any scientific institution of similar size in the country, the influence of this move will undoubtedly be felt by the entire gas industry.

Since the idea of a metallurgical research laboratory was first put into practical operation on a modified scale in 1920, the direction has been under Robert G. Guthrie, an outstanding metallurgist. The new laboratory will be directed by Mr. Guthrie with the assistance of an enlarged group of scientists on his staff. The Laboratory will operate as a division of the industrial gas department, of which D. W. Chapman is manager.

New Jersey Foundrymen Inspect New Gas Brass Melter

THE Public Service Electric & Gas Co., of Newark, N. J., realizing the importance of the new rotary gas-fired brass melter, invited the brass foundrymen of Northern New Jersey to be its guests on a trip to the plant of the Trenton Brass & Machine Co., of Trenton, N. J.

About a week before the day chosen for the trip, all brass foundrymen were sent a personal letter inviting them to take a bus trip to Trenton. A few of the major selling points of the furnace were put forward in this letter. About two days later, an industrial fuel representative called on each foundry to obtain an acceptance of the invitation.

The response was gratifying. Nearly every foundry was very much interested. On the day set for the trip, company cars were sent out to bring in the prospects and they were assembled on the industrial display floor. Each man was presented with a folder which contained a photograph of the furnace and a resume of its operating characteristics and costs.

During the two-hour trip, talks were given by J. P. Leinroth, of The Public Service Electric & Gas Co., who is a member of the Research Committee of the A. G. A., under whose auspices the furnace was developed, and P. C. Osterman, vice-president of the American Gas Furnace Co.

A luncheon was served at the Stacey-Trent Hotel, after which the men were taken to see the furnace. Ample opportunity was provided for the foundrymen to observe the melter and ask questions.

The reaction received from the trip has been very favorable.

COMMERCE YEARBOOK

ASSOCIATION HEADQUARTERS has made available to its members the Commerce Yearbook for 1929 in two volumes issued by the United States Department of Commerce. The addresses were run off at headquarters on government franked envelopes.

Commercial Section
G. M. KARSHNER, Chairman J. W. WEST, Jr., Secretary G. E. WHITWELL, Vice-Chairman

A. G. A. and Heating Contractors Approve Sales Principles

PRINCIPLES of merchandising central plant heating equipment have been approved by the American Gas Association and the Heating and Piping Contractors National Association and executed by their respective officers. The statement of principles which is expected to stimulate the sale of these appliances is as follows:

Since gas appliance sales and gas sales are so closely related and so dependent on each other, and

Since the service rendered by the appliance to the gas customer is what the customer is ultimately paying for, and

Since the proper appliance for a specific service, the correct and safe installation of the appliance, the proper customer instruction in the correct use of the appliance and a speedy service for repair and maintenance of the appliance are necessary factors in every gas appliance sale to a gas utility customer,

First, Manufacturers of gas appliances, dealers in gas appliances, the gas utility and the gas customer will more largely benefit by the gas utility extending its policy of merchandising gas appliances to encourage greater sales by trades.

Second, The margin on all gas appliances sold by the gas utility should be sufficient to cover all merchandising costs incurred, and thus enable progressive retail trades to merchandise gas appliances at a reasonable profit. It is recognized, however, that certain expenses incurred in the pioneering of appliances which have not yet met with sufficient local public acceptance to be generally accepted as merchandise items, should properly be charged to the promotion accounts of the utilities and not charged to merchandising.

Third, All local sales efforts by gas utilities and trades should be based on the merchandising of those appliances which conform to standards established by specialists of the United States Bureau of Mines, United States Public Health Service, United States Bureau of Standards and the American Gas Association as outlined in bulletins which may be obtained through the American Gas Association.

The Associations Concerned Recommend to individual gas companies and trades, the advisability and the necessity of greater sales activities in local fields for the ultimate purpose of increasing the sale of gas appliances and of promoting the proper use of gas, and

Further Recommend that proper and adequate service to the ultimate gas consumer be recognized as essential to all progressive sales efforts.

Heating and Piping Contractors
National Association,
By WALTER KLIE,
President.

American Gas Association,
By ALEXANDER FORWARD,
Managing Director.

THE Trade Cooperation Committee of the Commercial Section of the A. G. A., has made the following merchandising policy recommendations to the company members of the Association:

1. The gas company's advertising could be designed to promote trade sales as well as utility sales. If possible, an advertising campaign, financed jointly by the company and the trades, could be carried on.

2. Arrangements could be made to finance the trades on installment sales.

3. There could be a dealer contact man or organization to:

a. Educate the trade so that it will recommend the appliance best suited for the customer's needs.

b. Keep in touch with the trades' problems and harmonize the sales efforts.

4. The compensation schedule for utility salesmen could compensate for sales efforts which are productive of trade-sales.

5. All sales efforts could be premised on the sale of tested and approved appliances as rapidly as approved appliances are available.

6. The gas company could make available a speedy service for repair and maintenance of all approved appliances sold by the trades as well as those sold by the gas company.

7. Gas companies could to advantage cooperate with those local heating and piping contractors associations which are operating a certified heating program.

8. All possible mechanical work peculiar to the trades cooperating could be left with those trades providing the gas business is not adversely affected.

9. Proper customer instruction in the correct use of the appliance could be extended to cover approved appliances sold by trades.

These "Merchandising Principles for Developing Greater Sales of Gas Appliances" and the suggested details of local cooperative activities are not to be construed as committing the company members in respect to existing local merchandising practices and policies.

Research and Laboratory

(Continued from page 541)

it is understood that this work will not be for the purpose of extending any approval, the manufacturer will be required to agree not to publish or use any of the results obtained in a commercial way. It is apparent that quite a number of manufacturers will eventually take advantage of this new Laboratory service.

For a good many years there has been an obvious lack of standardization in types of construction and the method of making up cast-iron bell and spigot pipe joints. While this problem, as a general rule, is of greater interest to the manufactured than the natural gas man, it is certain eventually to become of importance to all. When a manufactured gas property is converted over to natural gas, one of the most trying problems is that of keeping leakage within reasonable limits, particularly if the company is serving stripped natural gas. The Association, at the recommendation of the Pipe Joint Research Committee, headed by O. S. Hagerman, of the American Light & Traction Co., has assigned this problem to the Association's Testing Laboratory. K. R. Knapp, formerly of The United Gas Improvement Co., has been employed to supervise this work. While a considerable portion of it will be completed at the Case School of Applied Science in Cleveland and at the University of Pennsylvania at Philadelphia, the responsibility for its successful completion has been centered at the A. G. A. Laboratory. Although this investigation has only recently been initiated, it gives every promise of developing some very useful and beneficial results.

The abundant supplies of natural gas, which are being made available so rapidly to large centers of population, indicate that the day is not far distant when this kind of gas augmented by some satisfactory type of manufactured gas should eventually become the generally accepted fuel where available. These developments, along with the large quantities of by-product gases that are being made available, should greatly improve the economic position of our industry and hasten the day when gas will become the universal fuel. With such transitions, of course, will come numerous operating difficulties which must be met and solved by our engineers. It is hoped by the Laboratory Managing Committee that the A. G. A. Laboratory will become a logical research center for the gas industry and that in this position it will not only effect marked improvement in our utilization equipment, but also become an important factor in successfully meeting the problems of the operating gas engineer.

Indiana Public Utilities Ass'n Elects Officers

AT a meeting of the board of governors of the Indiana Public Utilities Association, held in Indianapolis July 18, H. S. Morse, general manager of the Indianapolis Water Co., was elected President for the ensuing year. Thomas F. English, general manager of the Indiana & Michigan Electric Co., South Bend, was elected vice-president.

The members of the Board of Governors of the Indiana Public Utilities Association for the current year are: C. L. Kirk, vice-president and general manager, Citizens Gas Co., Indianapolis; F. J. Haas, vice-president, Southern Indiana Gas & Electric Co., Evansville; C. H. Rottger, President, Indiana Bell Telephone Co., Indianapolis; F. E. Bohn, President, Home Telephone & Telegraph Co., Ft. Wayne; R. M. Feustel, President, Indiana Electric Corp., Ft. Wayne; A. W. Brady, receiver, Union Traction Co., of Indiana, Anderson; W. H. Durbin, general manager, Terre Haute Water Works Corp.; N. A. Perry, President, Indianapolis Power & Light Co., and Mr. Morse and Mr. English.

Technical Section
HARRY E. BATES, Chairman B. V. PFEIFFER, Vice-Chairman
H. W. HARTMAN, Secretary

Some Aspects of Modern Gas Condensing

(Continued from page 543)

Inasmuch as the writer has had no experience with other types of condensing processes, this discussion from now on will be confined strictly to the performance of tubular condensers.

The tubular gas condenser is not much different in some of its characteristics than the surface condenser used in steam generating stations for condensing the exhaust of the turbines and engines, and it answers to many of the heat transfer laws that deal with such apparatus. The design of such a piece of apparatus means that in order to obtain a high heat transfer the following conditions must be carefully considered:

The water velocity in the tubes must be high enough so that there is turbulence in the tube. Otherwise a film of hot water will form next to the tube and, as water is a poor conductor, low rates of heat transfer will obtain. Likewise, the gas velocities in the apparatus must be sufficiently high to cause a sweeping or cleaning action of the cold belt of gas immediately surrounding the cold tube of the condenser. There is of course a further limitation placed upon the design of such apparatus that the amount of power required for circulating water and the amount of power required for forcing the gas through the apparatus shall not be an abnormal amount.

Tables I, II, and III give the performance of a tubular condenser installed on the gas outlet of the machine at the Boone works of the Iowa Railway and Light Corp. This test run was made with water going to the condenser at a rather high temperature namely 86°. However, the make per hour was relatively low but it will give you a good idea of the temperature drop that can be expected under such a condition.

A brief description of this condenser will be of interest. It is five ft. in diameter, having a height of twenty-five ft., six in.; there are 216 two-in. tubes, 22 ft. long; an effective cooling surface of 2517 sq.ft. The pump supplying this condenser has a normal capacity of approximately 60 to 80 gals. per minute. It is a closed system of circulation in the winter time; consequently, only condenser and pipe friction is handled by the pump. In the summer time when operated over the cooling tower, the pump operates at full load. The condenser was guaranteed by the manufacturer to cool gas from 180° F. saturated to 110° F.; with cooling water supplied at 60° F. it would require 60 gals. per minute when operating on the outlet of the machine. If installed on the outlet of the relief holder and a steady flow of gas passes through it, then the water required would be but 43 gals. per minute.

The amount of water vapor removed is interesting and of course these figures that are quoted can be found in any standard works on gas manufacture:

At 180° F. one M.C.F. of gas (referred to 30" and 60°) contains 48.49 lbs. of water vapor. This gives some idea of the amount of vapor removed in such a process, and that it has the further advantages that by such removal back pressure troubles are reduced, smaller pipe lines may be used, smaller exhauster using of course less power for operation, and a very considerable gain in relief holder capacity at once obtains because of the reduction in the volume and weight of the water vapor present in the gas.

Gas condensing apparatus has not received the serious attention from the operators and owners of gas works that it should receive. They are too often disposed to think that anything through which gas will pass and water will flow will do the job. Nothing is further from the truth. Such a piece of apparatus cannot be made up out of old boilers and other junk that may be available to the gas companies. It is a highly technical piece

TABLE I

Time	Gas to Cond. Deg. F.	Gas from Cond. Deg. F.	Temp. Drop Deg. F.	Water to Cond. Deg. F.	Water from Cond. Deg. F.	Rise Deg. F.	Rate of Make Per Hour Cu.Ft.
9 A.M.	190	108	82	85	124	39	24,000
10 A.M.	183	114	69	86	132	46	25,000
11 A.M.	188	117	71	86	131	45	24,000
12 N.	186	114	72	86	126	40	23,000
1 P.M.	184	120	64	86	130	44	24,000
2 P.M.	196	119	77	87	138	51	25,000
3 P.M.	184	121	63	87	130	43	22,000
4 P.M.	192	116	76	87	131	44	23,000
5 P.M.	190	118	72	86	135	49	23,000
Av.	188.5	116.2	72.1	86.4	131.0	44.8	23,640

TABLE II

Time	Gas to Cond. Deg. F.	Gas from Cond. Deg. F.	Temp. Drop Deg. F.	Water to Cond. Deg. F.	Water from Cond. Deg. F.	Rise Deg. F.	Rate of Make Per Hour Cu.Ft.
9 A.M.	180	88	92	64	82	18	33,500
10 A.M.	177	98	89	67	95	28	27,000
11 A.M.	179	100	79	66	92	26	30,000
12 N.	174	100	74	68	92	24	30,000
3 P.M.	178	98	80	66	88	22	30,000
4 P.M.	180	100	80	66	87	21	30,000
5 P.M.	176	96	80	66	85	19	32,000
Av.	177.5	97.2	82.0	66.2	89.0	22.6	30,700

TABLE III

Description	No. 1	No. 2 5′ 0″ Set Make	No. 3 6′ 0″ Set Make
Rate of Gas Flow	33.6 M/hr.	33.6 M/hr.	59.4 M/hr.
Cooling range	(187) 181-104° F.	(187) 181-90° F.	(187) 181-90° F.
84° F. Water Gals./Min.	88.5	145	377
84° F. Water Gals./M Gas	158	260	381
Sq.Ft. Surface per M per hr.	74.5	74.5	42.2
60° F. Water	—	180-90° F.	180-90° F.
Gals./Min.		59.7	128
Gals./M Gas	—	106.5	129.5
60° F. Water			

Remarks:—

Table 1 shows the conditions under which condenser operated as given by grand average of customer's tests of 10/5/27 to 10/11/27. The figure of 88.5 gals. cooling water per minute was determined by a heat balance. By this determination we established that the point of saturation of the gas was 181° F.

We have therefore shown the temperature 187° F. in brackets to indicate that while gas was cooled from 187° F., it was not until 181° F. that the real work of condensation began.

Table 2 shows how much of 84° F. cooling water would be required if the same amount of gas in Table 1 had been cooled from 181° F. (saturated gas) to 90° F.

This table also shows, for purposes of comparison, how much 60° F. water would be required to cool gas from 180° F. to 90° F., which figures are derived from one of our standard tables.

Table 3 shows the amount of gas made per hour by a 6 ft. set if run at the same relative capacity as was the 5 ft. set during the customer's test.

The amount of 84° F. cooling water required to cool gas from 181° F. (saturated gas) to 90° F. is shown as well as the amount of 60° F. water to cool gas from 180° F. (saturated gas) to 90° F.

Table III gives calculated values for other tests.

of apparatus, more so in many ways than the steam condenser that the electric man deals with because of the large amount of non-condensible gas to be handled. To obtain the greatest economy in design and in operation it requires the counter-flow principle and the multi-pass principle, that is that the hottest water meets the hottest gas and that the gas and the water both make several passes through the apparatus before going to the next step in the works process.

After such a piece of apparatus is in-

stalled, its tubes must receive regular cleaning as a thin film of scale on the water side will materially reduce the heat transfer and poor results will obtain. The installation of thermometer wells so that the temperature of gas going to the condenser and leaving the condenser, and the temperature of water going to the condenser and leaving the condenser, are necessary to obtain good and consistent operating results. Better still are permanently mounted indicating thermometers or multi-pen recording instruments.

While it was not given to the writer to discuss any further steps in gas manufacture, other than condensers, of more than passing interest to you is Table IV which gives the performance of the electric tar precipitator which has been in operation for several months at the Boone works. This gives statistical data as to the amount of electric power required for operation of this equipment and the amount of gas handled through this equipment.

TABLE IV

Month	Gas in M.C.F.	Kw.Hrs.
June	6,698	742
July	12,745	1,060
August	12,005	797
Sept.	12,247	672
Oct.	12,069	653
*Nov.	7,478	385
Total	63,242	4,309

* Nineteen days only.

We do not at the Boone works or any of our newer works use a scrubber, all of the purification process up to the oxide boxes being accomplished by the gas condenser and the Cottrell apparatus. The meter men report that they have observed nothing so far in meters that have been brought in to indicate that any trouble may be expected with such a system of condensing and tar removal. No naphthalene has ever been found beyond the precipitator. A marked reduction in the water vapor content of the gas has also been noted.

OUR NEW MEMBERS

Gas Companies

National Gas & Electric Corp., H. H. Hite, Asst. Treas., Battle Creek, Mich.
Hokkaido Gas Co., Ltd., Seishichi Iwasaki, Pres., Tokyo, Japan.
Lock Haven Gas & Coke Co., R. H. Beaton, Pres., Lock Haven, Pa.
Kokomo Gas & Fuel Co., S. E. Mulholland, V. P., Kokomo, Ind.
Greencastle Gas & Electric Co., S. E. Mulholland, V. P., Greencastle, Ind.
United Gas Co., A. C. Howard, V. P., Esperson Bldg., Houston, Texas.
Hagerstown Light & Heat Co. of Washington County, Hagerstown, Md. Wm. A. Tobias.
Industrial Gas Co., W. J. Parker, Bastrop, La.

Manufacturer Companies

Orbon Stove Co., H. A. Lengenfelder, Belleville, Ill.
L. S. French Laboratories, Leon Seideman, 296 Broadway, New York, N. Y.
Gehnrich Oven Co., Inc., Chas. L. Gehnrich, Pres., Skillman Avenue, Long Island City, N. Y.
Lapp Products Corp., J. A. Casey, V. P., 299 Madison Ave., New York, N. Y.
Welbilt Stove Co., Henry Hirsch, Flushing Ave. at 59th St., Maspeth, L. I., New York, N. Y.
H. Noreck Co., Inc., William A. Darcey, 227 Westchester Ave., Port Chester, N. Y.
Mohawk Asphalt Heater Co., G. M. Baker, 56 Weaver St., Schenectady, N. Y.
M. Meyers Fuel Saver Co., Inc., Roy L. Meyers, 151 So. River St., Janesville, Wis.
Bryan Steam Corporation,, Geo. T. Wright, General Mgr., Peru, Indiana.
Coal Conversion Corporation, F. E. Brocker, Pres., New York City.
U. S. Gas Range Company, J. P. Armstrong, General Mgr., Chattanooga, Tenn.
Mohawk Asphalt Heater Co., G. M. Baker, Partner, Schenectady, New York.
A. F. Thompson Mfg. Co., A. F. Thompson, Pres., Huntington, W. Va.

Individual Members

Mulcahy, J. T., Rockville-Willimantic Lighting Co., Willimantic, Conn.
Kuenzig, Joseph J., Philadelphia Company, Pittsburgh, Pa.
Black, Victor L., Equitable Gas Company, Pittsburgh, Pa.
Trammell, W. B., Houston Natural Gas Company, Houston, Texas.
Shively, Walter L., The Koppers Company, Pittsburgh, Pa.
Reigel, Victor Oliver, Public Service Elec. & Gas Co., Newark, N. J.
Jeffrey, Thomas G., Bastian Morley Ltd., Toronto, Canada.
Lyford, C. D., Minn-Honeywell Regulator Co., Minneapolis, Minn.
Dunglinson, Basil, Chicago By-Product Coke Co., Chicago, Ill.
Nordmeyer, Gerald J., The Koppers Company, Chicago, Ill.
Wyant, Kenneth Delano, Public Service Co. of No. Illinois, Chicago, Ill.
Turner, Walter V., Robbins Publishing Co., New York City.
Societatea Nationala de Gaz Metan, Bucharest, Roumania.
Johnson, Arthur W., Kansas Electric Power Co., Leavenworth, Kan.

American Meter Co. Holds Conference On Engineering and Sales

THE executive and sales personnel of American Meter Company assembled recently at the Metric Metal Works Division, Erie, Pa., for a three-day conference devoted to developments in gas measurement and to the consideration of practical methods for making sales and engineering service increasingly effective.

Several sessions were devoted to a study of the progress which has resulted from research at the Erie laboratory in connection with measurement by orifice. Particular attention was given to the integrated orifice measurement achieved in the Linderman meter. Investigations which have been carried on by the company in the field of displacement measurement were also presented.

Present plans for a progressive extension of experimental facilities were fully authorized and approved at the conference.

It is now established that experimental work relating to high-pressure measurement by iron case or orifice meters will be concentrated at the Erie laboratory.

At the D. McDonald & Co. Division in Albany, a considerable extension in laboratory facilities will make possible the centering of all problems relating to displacement measurement by tinned steel case meters. Experimental work on diaphragms and in apparatus for the testing of gases and meters will also be continued in this laboratory on a larger scale than previously attempted.

Statistical Data

(Continued from page 550)

the 91 companies show the following significant trends for the first half year:

(1) 7.7 per cent decrease in water gas production.

(2) 11.4 per cent decrease in retort coal gas production.

(3) 36.2 per cent increase in coke oven gas production.

(4) 25.5 per cent increase in quantity of coke oven gas purchased from steel and coke companies operating by-product coke oven plants.

(5) 51.0 per cent increase in natural gas purchased.

COMPARATIVE STATISTICS OF THE MANUFACTURED GAS INDUSTRY IN THE STATE OF NEW YORK FOR JUNE, 1929

(Data reported by 11 companies whose sales constitute 89% of the total manufactured gas sales in the State of New York)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
Customers						
Total	2,265,384	2,219,307	2.1	See June		
Gas Sales (MCF)						
Total	6,465,996	6,693,389	—3.4	43,792,548	44,060,317	—0.6
Gas Revenue (Dollars)						
Total	7,493,219	7,729,338	—3.1	50,316,966	50,786,535	—0.9
Gas Produced and Purchased (MCF)						
Gas Produced—						
(a) Water Gas Made	3,619,959	4,479,154	—19.2	30,495,552	33,810,989	—9.8
(b) Coal Gas Made	560,760	510,150	9.9	3,396,778	3,794,252	—10.8
(c) Coke Oven Gas Made	1,740,246	1,126,770	54.5	10,520,497	6,460,558	16.3
(d) Total Gas Produced	5,920,965	6,116,074	—3.2	44,412,827	44,065,799	0.8
Coke Oven Gas Purchased	314,077	284,408	10.4	2,005,878	1,697,232	18.2
Total Gas Produced and Purchased	6,235,042	6,400,482	—2.6	46,418,705	45,763,031	1.4

COMPARATIVE STATISTICS OF THE GAS INDUSTRY IN THE STATE OF CALIFORNIA FOR JUNE, 1929

(Data reported by 4 companies whose sales constitute 80% of the total gas sales in California)
(Two companies distribute Natural Gas)

	MONTH OF JUNE			SIX MONTHS ENDING JUNE 30		
	1929	*1928*	*Percent Increase*	*1929*	*1928*	*Percent Increase*
Customers						
Total	1,063,603	1,035,836	2.7			
Gas Sales (MCF)						
Total	6,196,991	5,391,763	14.9	47,594,503	39,103,626	21.7
Gas Revenue (Dollars)						
Total	3,826,280	3,489,221	9.7	30,628,000	26,664,229	14.9
Gas Produced and Purchased						
Gas Produced (MCF)						
(a) Water Gas made	17,535	15,830	10.8	146,646	93,946	56.1
(b) Oil Gas made	1,891,680	1,702,118	11.1	14,862,586	12,756,138	16.5
(c) Total Mfd. Gas Prod.	1,909,215	1,717,948	11.1	15,009,232	12,850,084	16.8
Natural Gas Purchased	4,791,494	4,225,283	13.4	38,503,255	30,875,735	24.7
Total Gas Prod. & Purch.	6,700,709	5,943,231	12.8	53,512,487	43,725,819	22.4

Associations Affiliated with A. G. A.

Canadian Gas Association
Pres.—Kenneth L. Dawson, Nova Scotia Light & Power Co., Ltd., Halifax, N. S.
Sec.-Tr.—G. W. Allen, 21 Astley Avenue, Toronto.
Conv., 1930.

Colorado Utilities Association
Pres.—H. S. Robertson, Denver Tramway Corp., Denver, Colo.
Sec.-Tr.—O. A. Weller, Public Service Co. of Colo., Denver, Colo.
Conv., Sept. 2, 3 & 4, 1929. Hotel Colorado, Glenwood Springs, Colo.

Empire State Gas and Electric Association
Pres.—Chas. S. Ruffner, Mohawk Hudson Power Corp., Albany, N. Y.
Chairman Gas Section—R. Van Vliet, New York & Richmond Gas Co., Staten Island, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
Conv., Sept. 19 & 20, 1929, Saranac Inn, N. Y.

Illinois Gas Association
Pres.—E. E. Lungren, Western United Gas & Electric Co., Aurora, Ill.
Sec.-Tr.—George Schwaner, 305 Illinois Mine Workers Bldg., Springfield, Ill.
Conv., 1930.

Indiana Gas Association
Pres.—C. L. Kirk, Citizens Gas Co., Indianapolis, Ind.
Sec.-Tr.—F. W. Budd, Central Indiana Gas Co., Muncie, Ind.
Conv., 1930.

Michigan Gas Association
Pres.—A. I. Snyder, Detroit City Gas Co., Detroit, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
Conv., 1930.

Mid-West Gas Association
Pres.—E. H. Vieregg, Central Power Co., Grand Island, Nebr.
Sec.-Tr.—Roy B. Searing, Sioux City Gas & Electric Co., Sioux City, Iowa.
Conv., Waterloo, Iowa, Apr. 14-16, 1930.

Missouri Association of Public Utilities
Pres.—T. J. Strickler, Kansas City Gas Co., Kansas City, Mo.
Sec.-Tr.—F. D. Beardslee, 315 N. 12th St., St. Louis, Mo.
Conv., 1930.

New England Gas Association
Pres.—J. J. Quinn, Boston Consolidated Gas Co., Quincy, Mass.
Exec. Sec.—C. D. Williams, 41 Mount Vernon St., Boston, Mass.
Chairman Operating Div.—Isaac T. Haddock, Cambridge Gas Light Co., Cambridge, Mass.
Secretary Operating Div.—H. G. Taylor, Lawrence Gas & Electric Co., Lawrence, Mass.
Chairman Sales Div.—J. H. Sumner, Cambridge Gas Light Co., Cambridge, Mass.
Sec.-Tr. Sales Div.—A. M. Slattery, Hoffman Heater Co., Boston, Mass.
Chairman Industrial Div.—L. B. Crossman, Boston Consolidated Gas Co., Boston, Mass.
Sec.-Tr. Industrial Div.—Chas. H. O'Donnell, Boston Consolidated Gas Co., Boston, Mass.
Chairman Acctg. Div.—R. D. Washburn, Massachusetts Lighting Co., Boston, Mass.
Sec.-Treas. Acctg. Div.—Otto Price, Boston Consolidated Gas Co., Boston, Mass.
Chairman Manufacturer Div.—T. H. Piser, Welsbach Co., Boston, Mass.
Sec.-Treas. Manufacturers Div.—J. H. McPherson, 250 Stuart St., Boston, Mass.
Conv., 1930.

New Jersey Gas Association
Pres.—R. A. Koelher, Public Service Electric & Gas Co., Newark, N. J.
Sec.-Tr.—H. E. Cliff, Public Service Electric & Gas Co., Newark, N. J.
Conv., 1930.

Ohio Gas and Oil Men's Association
Pres.—L. K. Langdon, Union Gas & Electric Co., Cincinnati, Ohio.
Sec.-Tr.—Wm. H. Thompson, 811 First National Bank Bldg., Columbus, Ohio.
Conv., 1930.

Oklahoma Utilities Association
Pres.—T. R. Weymouth, Oklahoma Natural Gas Corp., Tulsa, Okla.
Mgr.—E. F. McKay, 1020 Petroleum Bldg., Oklahoma City, Okla.
Conv., 1930.

Pacific Coast Gas Association
Pres.—C. H. Dickey, El Deseo, Del Monte, Calif.
Exec. Sec.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.
Conv., Sept. 10-13, 1929, at Del Monte, Calif.

Pennsylvania Gas Association
Pres.—W. A. Norris, Lebanon Valley Gas Co., Lebanon, Pa.
Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg, Pa.
Conv., 1930.

Pennsylvania Natural Gas Men's Association
Pres.—George E. Whitwell, Equitable Gas Co., Pittsburgh, Pa.
Sec.-Tr.—Frank W. Lesley, Pennsylvania Gas & Electric Co., York, Pa.
Conv., 1930.

Southern Gas Association
Pres.—D. H. Levan, Savannah Gas Co., Savannah, Ga.
Sec.-Tr.—G. H. Schlatter, Birmingham Gas Co., Burmingham, Ala.
Conv., 1930.

Southwestern Public Service Association
Pres.—Knox Lee, Southwestern Gas & Electric Co., Marshall, Texas.
Chairman Gas Section—Frank L. Chase, Lone Star Gas Co., Dallas, Texas.
Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
No Convention, 1929.

The Public Utilities Association of Virginia
Pres.—A. W. Higgins, Virginia Public Service Co., Charlottesville, Va.
Sec.—A. B. Tunis, 301 East Grace St., Richmond, Va.
Conv., Nov. 21 & 22, 1929, Chamberlin-Vanderbilt Hotel, Old Point Comfort, Va.

Wisconsin Utilities Association
Pres.—G. W. Van Derzee, The Milwaukee Electric Railway & Light Co., Milwaukee, Wis.
Exec. Sec.—J. N. Cadby, 105 Wells St., Milwaukee, Wis.
Meetings of Sections.

Eleventh Annual Convention of the American Gas Association
Atlantic City, N. J. October 14-18, 1929

Employment Bureau

(Address All Communications to Key Number)

SERVICES REQUIRED

GAS ENGINEERS wanted by public utility in Central Hudson Valley. Ages between 23 and 35 years. One graduate Civil Engineer, one Mechanical Engineer and one Chemical Engineer. Experience desired in construction, operation and maintenance of water gas plants, steel transmission and distribution lines, including services. In replying give age, education, experience and salary desired; also send small kodak picture. Address A. G. A.
Key No. 0146.

GAS ENGINEER: Gas apparatus manufacturing company desires services of technical man; about 30 to 35 years; must be good water gas operator and be able to start up new equipment. Give experience and salary desired. Address A. G. A.
Key No. 0147.

COMMERCIAL GAS ENGINEER required. Familiar large gas installations and appliances and capable supervising meter shop. Location, South America. Applicants should give full particulars, education, experience. References. Address A. G. A.
Key No. 0148.

WANTED—Young college graduates of mechanical or chemical engineering. Positions permanent. Good opportunity for advancement. Address A. G. A.
Key No. 0150.

MANUFACTURER of high grade gas, combination and coal ranges, located in the East, requires salesman for Connecticut and Massachusetts. Applicant must be experienced and have following among the better class trade in this territory. Liberal commission arrangement, and exclusive territory. Give full particulars and references in first letter, which will be held confidential. Address A. G. A.
Key No. 0151.

WANTED—Natural Gas Engineer and Executive. Must have practical experience in construction of main line and distributing systems, ability to make gas sales and purchases, and thorough knowledge of general executive work. Give full details of previous employment, number of years, and salary desired. Address A. G. A.
Key No. 0152.

WANTED—Two high-grade first-class salesmen to sell appliances in divisions of public utility in South. Work in progressive cities. Salary and commission. Address A. G. A.
Key No. 0153.

HOUSE HEATING SALESMEN—Eastern Utiilty has vacancy for two men between 25 and 40 years of age for sales work in Gas House Heating. A thorough knowledge of heating and a successful sales record are essential. Permanent position with good opportunity. Please give age, education, experience, and salary desired. Replies will be considered as confidential. Address A. G. A.
Key No. 0154.

OLD ESTABLISHED MANUFACTURER of small gas appliance accessories located in the Middle West has opening for man with creative or inventive ability for the design and development of new devices. State age, education, experience and salary desired in first letter. Address A. G. A.
Key No. 0155.

SERVICES OFFERED

MANAGER OR GAS DISTRIBUTION SUPT. Man with over 20 years' experience in one company desires position as manager of small property or distribution superintendent. Am experienced in water gas, high and low pressure, and can furnish the best of references from former employers, municipal authorities, etc. Age 43. Address A. G. A.
Key No. 288.

GAS ENGINEER, 45, experienced. Coal and Water Gas Sets, as manager for fair sized plant. Good executive. Address A. G. A.
Key No. 290.

YOUNG LADY with twelve years' experience in coke oven and gas business, desires secretarial position, New York City preferred. Address A. G. A.
Key No. 291.

ADVERTISING MAN, experienced in trade paper, newspaper, direct mail and other forms of advertising, available June 1. Now employed as advertising manager by large public utility. Capable of organizing and directing an advertising department or handling the work unassisted. Age 30, married. Protestant. No objection to location. Address A. G. A.
Key No. 292.

AVAILABLE, a man who has been employed through a continuous period of years in nearly all branches of the gas business. General office to superintendent of manufacture and distribution, including both coal and water gas. Would like to make a similar connection or one of general supervision. Address A. G. A.
Key No. 293

POSITION WANTED—Technical man now employed desires new location. Eight years' experience in distribution and transmission of natural and manufactured gas. Am able to organize and direct large crews. Also experienced in leakage surveys and appraisal work. Address A. G. A.
Key No. 294.

TECHNICAL GRADUATE, twenty years' experience in manufacture of water gas. Age 45, married. Open for position as manager or superintendent. Address A. G. A.
Key No. 295.

WANTED—Position as assistant to engineer of distribution by young man with four and one-half years' experience in Distribution Department of large corporation. 22 years old. Single. Willing to travel. Good references. Address A. G. A.
Key No. 296.

TECHNICAL MAN—Due to merging companies, looking for a position as manager or supt. of small company or in operating department, 15 years' plant work, 2 years in engineering and operating departments; age 41. Address A. G. A.
Key No. 297.

CERTIFIED Public Accountant (N. Y.) five years' gas and electric rate case and accounting experience, university graduate, age 30, immediately available. Address A. G. A.
Key No. 298.

A TECHNICALLY EDUCATED GAS ENGINEER, now employed, with 15 years' experience in Coal and Water Gas Operation, Distribution and Industrial Sales, desires new connection. Address A. G. A.
Key No. 299.

PUBLIC RELATIONS DIRECTOR—The State House and political reporter for one of the large New England newspapers desires connection with a public utility or manufacturing enterprise where his wide experience in publicity, house organs, statistics, business research, governmental and economic conditions will be of value. Ten years all branches newspaper work. Massachusetts Tech and Columbia. Age 29 and married. Has handled many public utility cases and other important newspaper assignments. Excellent recommendation. Address A. G. A.
Key No. 300.

EXPERIENCED APPLIANCE SALESMAN — Man with several years experience selling best known lines of gas heating appliances. Would consider similar position or direction of merchandising department some growing gas utility. Texas, Oklahoma or Kansas preferred, but will go anywhere opportunity offers. Address A. G. A.
Key No. 301.

ENGINEER, technically educated, with wide experience in steam engineering, operation and five years Superintendent of Customer's Service Department of a large gas company. Desires connection preferably where both experiences can be used to advantage. Address A. G. A.
Key No. 302.

AVAILABLE, New Business and Commercial Manager. Age 30, married. Has successful record merchandising gas appliances, house heating, etc., with Public Utility. Desires position in Commercial Field. Technical education and familiar with Engineering problems and Office routine. Good executive. Address A. G. A.
Key No. 303.

WOULD like communication with gas company seeking experienced sales engineer to organize and start house heating and industrial department. Especially gas company that is looking forward to load building. Thirty-five years of age, experience in all phases of industrial sales such as house heating. restaurants, factories, domestic appliances, good will building and holding present business. Also, three years with manufacturer on sales of gas appliances. References. Address A. G. A.
Key No. 304.

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